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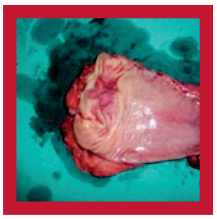

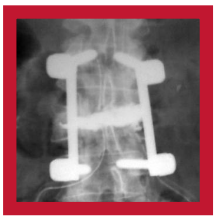

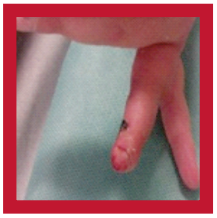

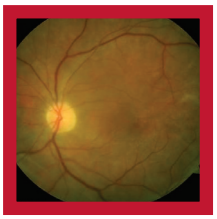

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Content

Editor's Letter

Dear Colleagues,

Editorial Board has decided to print most of the editions of Scripta Medica in Serbian language, which would make it accessible to most colleagues. Scripta Medica in English language will be printed in fewer editions. Most doctors understand their native language better than English language, and it is easier for them to communicate.

Our intention is to achieve higher indexation rate of the journal using English version of Scripta Medica.

Scripta Medica is now in the International Index Copernicus and EBSCO database. Our ambitions are to set Scripta Medica in the DOAJ, KOBSON, CROSS REF database, etc. This indexation would assure Scripta Medica to be at the level of majority of medical journals published in region. Our aim is to set Scripta Medica in the Medline database.

We want to reach this level with your participation that is reflected through the writing scientific papers, case studies, etc. While writing your paper, ***you can cite papers published in Scripta Medica!*** Your constructive critiques and tips will lead to a better quality of Scripta Medica.

The Editorial Board will do everything to encourage you and to make sure your work has quality newsworthy in Scripta Medica. Without quality, we are unable to get into any of these databases. You can send your works written in Serbian language. After we recive work from author we will review that work in 20 days and inform author.After the review and acceptance for publication, the work will be returned to the author for a translation in English language.

Keep in mind that your work must absolutely follow *THE INSTRUCTIONS FOR AUTHORS PREPARING THE MANUSCRIPTS FOR SCRIPTA MEDICA!*

Papers can be sent via e - mail; drmrs@teol.net, editor@scriptamedica.com and katedrahirurgijebl@gmail.com

Currently, adjustments are made on Scripta Medica web site. Scripta Medica, both in Serbian and English language, will be posted on the site, which will allow you to use the language you want. You will be able to send your works via the site.

We will open new sections such as a letter to the editor, special articles, papers in clinical practice, ongoing medical education, etc., which will be published in Scripta Medica, wherefore we expect your help and support.

I think that, by working and cooperating together, we can achieve success, for the benefit and pleasure of all of us.

Editor-in-Chef
Predrag Grubor, PhD

PROFESSIONAL PAPER

UDK 616.35-006.6-089

Initial Results of Treatment of Rectal Cancer using the Neoadjuvant Treatement

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ABSTRACT:

Introduction. Treatment of rectal cancer needs additional preoperative improvements that would decrease tumor volume and move away the lower edge of the tumor from a dentate line, allowing a higher percentage of operability and higher percentage of AR for APR and sterilize potential locoregional tumor deposits. Surgery can accomplish these improvements by using radio and chemotherapy.

Patients and Methods. From September, 2011 to September, 2013, 153 patients with rectal cancer were treated. Neoadjuvant radio and chemotherapy by the Swedish protocol were applied in 20 patients (13.07%) with T 2-4 stages. There were fifteen men (75%) and five women (25%), average age was 59.28 years. Long course therapy occurred in fifteen (75%) and short course in five patients (25%).
When compared to the previous two-year period, the percentage of inoperable cancers was decreased by 0.9% (p = 0.61) during the period of application of neoadjuvant therapy. There were also some other differences: a number of APR was 19, i.e. decreased by 3.85% (p = 0.83) or for 10 patients when compared to the previous two-year period, when there was 29 APR.

Conclusion. Neoadjuvant therapy may convert up to 60% (3 of 5) of inoperable patients into an operable group. The percentage of APR is lower by 3.5% (p = 0.83), i.e. 10 patients when compared to the previous two-year period and neoadjuvant radio and chemotherapy does not affect the anastomosis healing process and / or the occurrence of fistula and / or abdominal collection.

KEY WORDS:
cancer, rectum, surgery, neoadjuvant treatment

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(Scr Med 2014:45:6-9)

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Introduction

Colorectal cancer is the most common abdominal neoplasm with an average prevalence of 13.2 / 100 000 population / year in Greece, to 30.6 in Italy.[1] Banja Luka has about 20 new cases . Five-year survival is still unsatisfactory, with 50-90% in stage II or 30-60% in stage III.[2] Local recurrence in patients who are not included in radiotherapy is 15-45%, [3] (usually around 27%), and in case of the operated patients with radiotherapy, local recurrence is below 10%.[4] Operability , the choice of the abdominal rectal resection (AR) or abdominoperineal resection of the rectum (APR), the reduction of local recurrence and extension of Progression free survival (PFS) and / or overall survival (OS) are the tasks of treatment in which surgery alone can not give better results than achieved. Local tumor severity defines operability, i.e. the ability of the tumor resection. Distance of the lower border of the tumor from a dentate line of rectum limits the possibility of making colorectal anastomosis instead of definitive colostomy . Standards of operability of the tumor and AR or APR are intraoperative

constants that can no longer be affected by achieved levels of operative techniques. Surgery needs additional preoperative improvements that would:

1) decrease tumor volume and move away the lower edge of the tumor from a dentate line, allowing a higher percentage of operability and higher percentage of AR for APR and

2) sterilize potential locoregional tumor deposits. Surgery can accomplish this improvements by using radio and chemotherapy. During the last 20 years, different studies have been conducted, with the use of neoadjuvant therapy according to different protocols, and the most utilized are short term protocol (Swedish study) with five doses of 5 Gy irradiation , and long term protocol (American study) with twenty eight doses of 2 Gy irradiation together with chemotherapy in the first and last week of treatement.[4,8,18]

Objective

1) To show the extent and level (short or long course) use of neoadjuvant radio and chemotherapy ,
2) To establish if neodjuvant therapy increases the percentage of operability of rectal cancer,
3) To define if this treatment affects the reduction of abdominoperineal resection of the rectum and definite colostomy and
4) To establish if it affects negatively (fistula, stenosis) on the healing of colo-rectal anostomosis.

Patients and Methods

From September, 2011 to September, 2013, 153 patients with rectal cancer were treated. Neoadjuvant radio and chemotherapy by the Swedish protocol were applied in 20 patients (13.07%) with T 2-4 stages. There were fifteen men (75%) and five women (25%), average age was 59.28 years. Long course therapy occurred in fifteen (75%) and short course in five patients (25%). Radical surgery was done in 18 patients (ten AR, four APR, one Transanal Endoscopic Microsurgery (TEM) and three Transanal excisions) and two patients underwent a definitive colostomy. (Table 1.)

Table 1. Operative procedures after neoadjuvant therapy

Operations	No.	%
Low anterior resection	10	50
Abdominoperineal resection	4	20
TEM or transanal excisions	4	20
Inoperable	2	10
In total	20	100

Resection margin was in all patients with anterior resection, even in cases where the resection margin was <10 mm distant from the lower edge of tumors.

Results

We used Ryan's classification for assessing the response of tumor tissue to neoadjuvant therapy: 0-complete response = one patient, 1-moderate response = fifteen, 2-minimal answer= two, and 3-unanswered tumor tissue = two patients.

When compared to the previous two-year period, the percentage of inoperable cancers was decreased by 0.9% (p = 0.61) during the period of application of neoadjuvant therapy. There were also some other differences: a number of APR was 19, i.e. decreased by 3.85% (p = 0.83) or for 10 patients when compared to the previous two-year period, when there was 29 APR. (Table 2.)

Thanks to the good tumor response, three (60%) out of five patients were moved to the operable group. Although the sample of patients with rectal cancer was lower for 26 patients when compared to the previous two-year period, the number of inoperable carcinoma of the rectum after the application of neoadjuvant terapy decreased by 0.9% (p = 0.61). There was only one patient with local recurrence (5.5%).

There was not any postoperative complications in terms of recto-vaginal fistula and / or abdominal collections. Interference by incontinence and bowel mucosal secretions occurred in one patient, while there was no bleeding after irradiation.

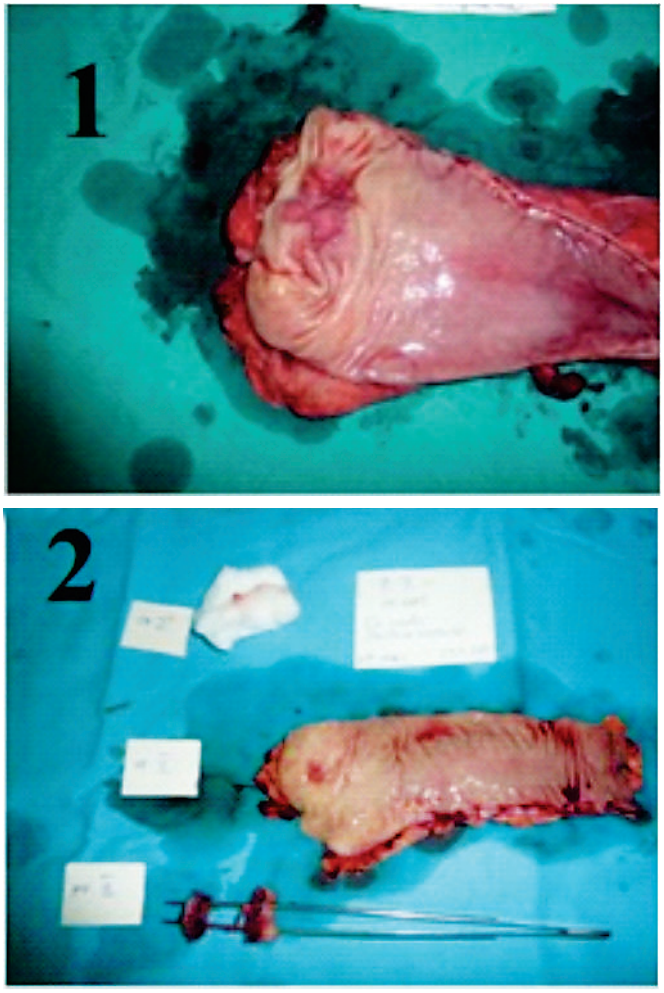
Table 2. Results of application of neoadjuvant therapy

Operations	September, 2009 - August, 2011		September, 2011 - August, 2013	
	No.	%	No.	%
Low anterior resections	132	73.69	120	78.44
Abdominoperineal resection	29	16.26	19	12.41
Inoperable	18	10.5	14	9.15
In total	179	100	153	100

Period of two years is short for follow up: PFS and / or overall survival. It is worth mentioning that all patients who underwent radical procedure (18 patients) are alive and that only one of them has a local recurrence. The majority of surgically treated patients (14 of 18 patients) have a good quality of life, due to the lack of definitive colostomy and the absence of serious complications. The study will be continued. Accordingly, we will check whether neoadjuvant radio and chemotherapy affect survival. The authors state that this therapy does not affect overall survival.

Discussion

A local severity of rectal cancer (bulky tumors) is one of the most common factors of inoperability. In 133 patients without neoadjuvant therapy, the percentage of inoperable rectal cancer was 9.15% (14 patients). Stabilization of the disease and the reduction of the tumor volumes, (Fig. 1. and 2.) with respect to operative techniques, provide a greater ability to converte initial inoperable tumor into a group of operable. The effect of this treatment is also expected in recurrent and / or bulky tumors. Thanks to long course therapy, three (60%) out of five patients became operable due to the significant downsizing.



Figures 1. and 2. Downsizing of rectal cancer after neoadjuvant therapy

Local recurrence of rectal cancer is an ongoing concern, especially in conditions when the radiation therapy (pre and / or post-operative) is uncertain or absent. Rectal cancer patients, where surgery is applied with chemotherapy, have a local recurrence of 15-45%.[3] The percentage of local recurrence is less than 10% and preferably about 8% in the group of patients where neo and / or adjuvant therapy is applied.[9] 15 years ago, we had a percentage of local recurrence in T3 and T4 stages up to 25%.[10] With the neoadjuvant therapy, the percentage of local recurrence was 5.5% (one patient), mainly due to neoadjuvant therapy.[14]

Improvement of operative techniques by applying new technologies (primarily stapling and "ligasure" technology) allows operability and preservation of the anal sphincter in only a number of the tumors, while the others need downsizing for better results.

The percentage of definitive colostomy in middle and lower thirds of the rectum in a well-organized surgery is up to 20%. [11-13] In the last 15 years, the percentage of these operations in our clinic was very high and was up to 45%.[10] Increasement of the distance of the lower edge of the tumors to dentate line can only be achieved by downsizing of the tumors. In 18 patients (80%), we had the downsizing of the tumor, thanks to which we made 10 AR and four transanal wedge excisions and / or TEM procedures. Five years ago, all of these patients would have had APR of rectum or definitive colostomy. It is known that a low colo-rectal anostomosis (within 5 cm. from dentate line) have a dehiscence of 3-25% , the protection of the anastomosis are done routinely. [15-17]

Conclusion

1. The percentage of 13.7% of patients with rectal cancer in which we apply neoadjuvant therapy is unsatisfactory and does not correspond to real conditions;
2. Neoadjuvant therapy may convert up to 60% (3 of 5) of inoperable patients into an operable group;
3. The percentage of APR is lower by 3.5% (p = 0.83), i.e. 10 patients when compared to the previous two-year period;
4. Neoadjuvant radio and chemotherapy does not affect the anastomosis healing process and / or the occurrence of fistula and / or abdominal collection.

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Početni rezultati liječenja carcinoma rektuma primjenom neoadjuvantne terapije

APSTRAKT

Uvod. Hirurškom liječenju karcinoma rektuma su potrebna dodatna preoperativna poboljšanja koja bi, smanjila volumen tumora i udaljila donju ivicu tumora od ore serate rektuma omogućujući veći procenat operabilnosti, odnosno veći procenat AR umjesto APR, “sterilizovala” potencijalne lokoregionalne tumorske depozite. Ova preoperativna (neoadjuvantna) terapijska poboljšanja, hirurgija može dobiti sa radio i hemoterapijom.

Ispitanici i metode. Od septembra 2011. do septembra 2013. liječili smo 153 pacijenta oboljela od rektalnog karcinoma. Neoadjuvantnu radio i hemio terapiju primijenili smo kod 20 (13,07%) bolesnika stadija T 2-4. Muškaraca je bilo petnaest (75%), a žena pet (25%), prosječne životne dobi 59.28 godina. Petnaest bolesnika (75%) bilo je na terapiji po dugom protokolu, a pet bolesnika (25%) na terapiji po kratkom protokolu.

Procenati neoperabilnih karcinoma u periodu primjene neoadjuvantne terapije je manji za 0,9% (p=0,61) u poređenju sa prethodnim dvogodišnjim periodom, a broj APR je 19, odnosno manji je za 3,85% (p=0,83), odnosno za 10 bolesnika u odnosu na prethodni dvogodišnji period kad smo imali 29 APR.

Zaključak. Neoadjuvantnom terapijom može se prevesti do 60% (3 od 5) inoperabilnih bolesnika u grupu operabilnih. Procenat APR je manji je za 3,5% (p=0,83) odnosno za 10 bolesnika u poređenju sa prethodnim dvogodišnjem periodom i neoadjuvantna radio i hemoterapija ne utiču na process zarastanja anastomoza i/ili pojavu fistula i/ili abdominanilnih kolekcija.

KLJUČNE RIJEČI:

karcinom, rektum, hirurgija, neoadjuvantna terapija

PROFESSIONAL PAPER

UDK 616.24-084

Oncological-Surgical Treatment in Inoperable and Border Operable Nonmicrocellular Lung Cancer

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ABSTRACT

Introduction: Approximately only 20-40% of those who suffer from nonmicrocellular lung cancer at detection of disease are candidates for operational treatment. Pre-operational use of inductive oncological therapy at 60- 75% of cases "takes" the disease into lower level, while at 50% of cases it is possible to do resectional treatment. The aim of work is to demonstrate efficiency of inductive oncological treatment in relation to possibility of resection.

Material and methods: This analysis includes 62 patients who underwent different surgical treatment, and after inductive oncological treatment.

Results: There is a ignificant statistical difference in frequency of appearance between the two most common sorts of cancer (χ^2=25; p=0), the same as statistically significant difference in frequency of certain sorts of cancer according to gender (p= 0). Using Fisher exact test, there was no statistically defined significant dependence between the sort of cancer and its sensitivity to chemotherapy (p=0,2) the same as there was not statistical dependency of chemo therapeutical sensitivity in relation to gender (p=1). Using chi-square test, there was no defined statistically significant difference in frequency of sort of operation in relation to sort of cancer (χ^2=1; p=0,6). There is a presence of statistically significant positive connection between the days spent at intensive care and days spent at the ward of surgically treated patients (rho =0,63; p< 0,01) and also there is statistically significant dependence between the response to chemo therapy and days spent at intensive care (p=0). There is also defined statistically significant dependency between the sort of operational treatment and days spent at intensive care and at ward of standard care (χ^2=17; p=0 vs. χ^2=11; p=0).

Conclusion: There is an evident relation of sort of surgical treatment and operational techniques to duration of post operational treatment.

KEY WORDS:
lung cancer, inductive oncological therapy, sort of surgical treatment.

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Accepted: April 7, 2014.

Introduction

The most important part of therapy treatment of nonmicrocellular lung cancer is resectional treatment, whose aim is maximum survival and eventual cure with less morbidity and perioerational morbidity as well as perseverance of life quality. During the operation, radical and totally curative resection is done, when the primary tumor is completely removed with lymph denectomy of regional lymph nodes, with macroscopically visible tumoral infiltrations as well as when it is confirmed that resectional borders are without presence of malignity.[1-3]

Polymorfity and untypical of symptomatology of disease, as well as its long time period of development result in detection of disease in already developed phase, when there is metastatic disimination, malign invasion of contra lateral lymph nodes, and local affection of intra thoracal structures. All the above mentioned makes surgical treatment contra indicative. According to numerous studies, only 20-40 % of patients, after being diagnosed with malign of lung are candidates for surgical treatment.[1,4,5]

In the last 20 years, they have started with the application of inductive (neoadjuvant) oncological therapy, with the aim to improve the survival through "taking" the disease into lower level, influencing primary tumor, drainage lymph nodes, потentially present micro metastasis, as well as other substances originating from the primary tumor.

It was evident that, with the abovementioned therapy, the disease led to a lowerlevel at 60-75% of patient, and at initially evaluated inoperable cases, resection was possible, after inductional therapy at 50% of patients. A great number of studies on the large number of samples has confirmed significantly longer survival of combined modality of curing, even three times higher, in relation to oncological treatment on its own.[6-9]

It is commonly spread attitude that, during radiographical and bronchiological preoperational reevaluation of disease, surgical treatment is justified only at clear regression on the level of primary tumor and mediistinuum and that it is justified to do the least possible volume of resection, as long as ex tempore test of operational material confirms healthy resectional borders. Taking into account secondary effect of inductive therapy, we have to find maximally qualitative surgical access bearing in mind decreasing number of post operational complications.[8,10,11]

The aim of work is to define efficiency of inductive therapy at initially inoperable and border operable nonmicrocellular lung cancer, to reevaluate regression of change in size, and to demonstrate the efficiency of oncological treatment in relation of possibility with resection, post operational treatment, statistical dependency of mentioned parameters, and frequency of early post operational complications in relation to type of surgical treatment.

Patients and Methods

This analysis included 62 patients of different age group and both genders, who underwent the surgical treatment at Thoracic Surgery Clinic KCU in Sarajevo during the period from January 1st, 2011 to December 31st, 2013 after going through 2-6 phases of inductive oncological therapy because of inoperable or border operable nonmicrocellular lung cancer and according to the decision of interdisciplinary consillium for tumors. Different therapeutical modalities were applied with cisplatin as base therapy.

Bronchio pulmological diagnostical analysis of patients was done at Lung Disease Clinic KCU in Sarajevo, and was minimally consisted of CT of thorax with intravent application of contrast means, bronchoscopy and spirometric tests, sonography of stomach, before and after the oncological treatment. Pathohistological diagnosis was defined according to standard histological types of tumor, at the Institute for Clinical Pathology KCU in Sarajevo, and samples of tumors were taken by endoluminal biopsy during bronchoscopy, with radiographically led transthoracic needle biopsy or by thoracoscopical treatment.

In our analysis initial size of tumor was taken according to radiographical test before the therapy (CT), as well as according to post operational pathohistological test. Resectional treatments were done according to standard posteroletar thoracotomic access with separate anesthesia. Vascular elements were resecinated by vascular selfstitchings or by double ligation, while the bronchial structures were always done by lineral staples with or without preserving of resected bronchus by transpositioned shank of intercostal muscle. Duration of hospital postoperational treatment was divided in number of days being cured at section of intensive care or at the word, while evident complications were only those which appeared before resigning the patients.

The results are presented descriptively, numericaly, with tables and graphs with legends and descriptive explanation of some values and variables. Findings are observed in absolute and the percentage values, calculating the arithmetic means and standard deviation. Nonparametric variables were analyzed using chi-square test. Statistical significance (α) is set as $p<0,05$.

Results

Frequency of surgically treated patients according to gender and age structure with standard statistic parameters is demonstrated in Table 1.

Table 1. Demonstration of analyzed patients according to gender and age structures

Descriptive statistics	Male	Female	Total
Frequency (f/N)	48	14	62
Arithmetic mean (AS)	63,1	59,9	61,9
Standard mistake AS	0,3	0,4	0,3
Standard deviation (SD)	0,9	2,6	0,9
Minimum (years)	49	39	39
Maximum (years)	77	69	77

There was a statistically significant difference in average values of age of patients with lung cancer in relation to their gender (p=0). From the above mentioned it is evident that it is more frequent in males and this relation is 3:1.

Frequency of planocellular lung cancer at male was 80,4% (39/48), adenocancer - 15,2% (7/48), and macrocellular cancer - 4,4% (2/48). Relation between planocellular and adenocancer at females was identical - 50% (7/14), and there is no macrocellular lung cancer.

Statistically there was a significant difference in frequency of appearance between two most common types of lung cancer at total number of patients (χ^2 test =25; p= 0). Fisher exact test showed that there was certified statistically significant difference in frequency of certain types of lung cancer according to gender (p=0).

Average size of cancer before chemotherapy was 78 ± 3 mm, and is statistically bigger than after the therapy - 51 ± 3 mm (p<0,05). Average size of regression is 27 ± 2 millimeters. Ficher exact test did not show statistically significant dependency between type of cancer and its sensitivity to chemotherapy (p = 0,2) the same as there was no statistical dependency of chemotherapeutic sensitivity in relation to gender (p=1).

When compared to the surgical treatments, the leading ones were pulmectomies with preservation of bronchi -34% (21/62), standard pulmectomies –31%(19/62), lobectomies and bilobectomies-27% (17/62), andeksplorative thoracotomies – 8% (5/62)

Chi-square test did not certify statistically significant difference in frequency of sort of operation in relation to type of cancer (χ^2=1; p=0,6).

Average number of days spent at the intensive care was 6,8 ± 0,4, and average number of days spent at the hospital ward was 8,5 ± 0,6. There was a defined statistically significant positive connection between days spent at the intensive care and days spent at the hospital ward at surgically treated patients because of lung cancer (rho =0,63; p<0,01).

Significant statistical connection between gender, type of cancer and days spent at the intensive care was not found. Fisher exact test certified statistically significant dependency between response to chemotherapy and days spent at the intensive care (p=0,03).

There was no notable significant dependency between gender, type of cancer, impact of chemotherapy and days spent at the ward.

Tables 2. and 3. show a relationship between number of post operational days spent at the intensive care and the ward in dependency of type of surgical treatment in percentage and in numerals.

Table 2. Dependency of sort of surgical treatment and days spent at the intensive care

Sorg of surgical treatment	Relation (N)	Days of intensive care (DIC)		Total
		Less than 7	More than 7	
Pulmoctomy	N	5	14	19
	Sort of surgical tr.	26,3	73,7	100
	DIC	16,2	53,8	33,3
	Total	8,7	24,6	33,3
Pulmoctomy with preservation of bronchus	N	10	11	21
	Sort of surgical tr.	47,7	52,4	100
	DIC	32,3	42,3	36,8
	Total	17,6	19,3	36,8
Lobectomy Bilobectomy	N	16	1	17
	Sort of surgical tr.	94,1	5,9	100
	DIC	51,6	3,9	29,8
	Total	28,0	1,8	29,8

Hi- square test certified statistically significant dependency between sort of surgical treatment and days spent at the intensive care (χ2=17; p=0).

Table 3. Dependency between sort of surgical treatment and days spent and the standard care ward

Sorg of surgical treatment	Relation (N)	Day of standard care (DSC)		Total
		Less than 9	More than 9	
Pulmoctomy	N	7	12	19
	Sort of surgical tr.	36,8	63,2	100
	DIC	18,4	63,2	33,3
	Total	12,3	21,1	33,3
Pulmoctomy with preservation of bronchus	N	17	4	21
	Sort of surgical tr.	81,0	19,0	100
	DIC	44,8	21,1	36,8
	Total	29,8	7,1	36,8
Lobectomy Bilobectomy	N	14	3	17
	Sort of surgical tr.	82,4	17,6	100
	DIC	36,8	15,9	29,8
	Total	24,6	5,3	29,8

Chi-square test certified statistically significant dependency between sort of surgical treatment and days spent at the standard care ward ($\chi 2=11$; p=0).

Table 4. numerically shows post operational complications which appeared during hospital treatment at patients who underwent inductive oncological therapy

Table 4. Relationship between number of early complications in relation to sort of operation

Sort of complication	Pulmectomy with preservation of bronchus	Pulmec-tomy	Bilobec-tomy Lobec-tomy	Eksplora-tive thoraco-tomy
Cardiovascular	5	4	2	0
Pulmlogical	3	2	1	1
Fistula BP	0	3	0	0
Empyiema pl.	0	1	0	0
Chemoragy	1	2	1	0
Infection of wound	1	1	1	0
Death	0	2	0	0
Without compl.	9	8	12	4
Total	19	21	17	5

Discussion

In our analysis, relation between getting a disease in relation to gender which is 3:1 in advance of males responds to modern data, while the reason for this is more frequent use of consuming nicotine which is more common with male gender. Appearance of disease at elderly population where the average age of total number of surgically treated patients is 62 ± 1 (male 63 ± 1; female 57 ± 3), confirms time flow of disease until the appearance of symptoms.[4,5,12,13]

Abundance of disc layer cancer at male was 80% adenocancer 15% and macro cellular malign 5%. At female gender this percentage relation between the two most common types of cancer was 50%:50%. Mentioned data correspond to available data which describe this field.[3-5,14] There was a statistical significance of appearance of the two most common types of cancer at total number of patients (p=0), as well as relation to gender (p=0).

Regression of size change in average of 27 ± 2 millimeters (78 ± 3 mm. v.s. 51 ± 3 mm.) in our work is statistically significant (p<0,05). In our work, there was no statistical dependence between sort of cancer and its sensitivity to chemotherapy (p=0,2), the same as there was no statistical dependence of chemotherapy sensitivity in relation to gender (p=1). According to present oncological data adenocancer has better chemotherapy response. [3,6,7]

Taking into account the expected post operational complications, was the greatest number of pulmectomies with preservation of bronchus by trans positioned stem of inter costal muscle (34%) muscle was performed 31% of standard pulmectomy, lobectomy and bilebectomy 27%, while 8% of patients underwent explorative thoratocomy were performed as well. At resectabilable cases regional regional lymph denectomy was done. Percent relation of sort of surgical treatment of our analysis was identical to the available data from the mentioned field. [2,10,15] In our work, there was no statistically significant difference in frequency of type of surgical treatment in relation to type of cancer ($\chi^2=1$; p=0,6).

Average number of days spent at intensive care was 6,8 ± 0,4. Much greater number of patients who underwent plumoctomy with preservation of bronchus spent less then the mentioned average -48% in relation to other group who underwent plumoctomy -26%. 94% of patients who went through lobectomy treatment spent less time at intensive care than mentioned in average (Table.2). From the abovementioned, the significance the significance of sort and technic of surgical treatment and time spent at intensive care ($\chi^2=17$; p=0) is seen. Significant statistical dependence between gender of patients and type of cancer and days spent at intensive care was not found. There is confirmed statistically significant dependency between response to CT and days spent at intensive care (p=0,03).

Average number of days spent at hospital ward was 8,5 ± 1. 81 % of those who underwent pulmoctomy with preservation of bronchus spent less number of days in relation to the rest of those who underwent pulmoctomy -37%. Patients who underwent lobectomy spent less than the mentioned number of days at ward (Tab.3). Relation between sort of surgical treatment and time spent at ward was statistically significant ($\chi 2=1$; p=0).

There was no evidence of significant dependency between gender of patients, type of cancer, impact of chemotherapy and days spent at the hospital standard care ward.

Statistically positive connection between days spent at intensive care and days spent at the ward at surgically treated patients with lung cancer (rho=0.62;p<0.01) was confirmed. Duration of postsurgical flow of our patients was identical to the number of days in comparison to available studies.[2,3,10,11,16]

In Table 4, there is numerically shown number of complication at analyzed cases which appeared during the treatment in hospital. Cardiopulmonal complications ware most commonly followed by disorder of heart rhythm and tension, which at two patients were possibly the cause of death. At two patients, there was also appearance of bronchus pleural fistula and those were the patients that didn't undergo the preservation of bronchus. Postsurgical bleeding from the wall of

thorax was solved with retoractomy. Reason for appearance of empiom and infection of operational wound could be explained by decrease of immunity response because of post chemotherapy treatment and weakness of organism because of basic disease, as well as by age of patient.[11]

Conclusion

There is evident relation between sort of surgical treatment and operational techniques and duration of post operational cure and appearance of post operational complications, after inductive oncological treatment at patients with inoperable and border operable lung cancer.

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Onkološko-hirurški tretman inoperabilnog i granično operabilnog nemikrocelularnog karcinoma pluća

APSTRAKT

Uvod: Aproksimativno samo 20-40% oboljelih od nemikrocelularnog plućnog karcinoma prilikom detekcije bolesti su kandidati za operativni tretman. Preoperativna primjena indukcione onkološke tarapije u 60-75% slučajeva „prevodi" bolest u niži stadij, a u oko 50% slučajeva je moguće učiniti resekcioni zahvat. Cilj rada je pokazati efikasnost indukcionog onkološkog tretmana u odnosu na mogućnost resekcije.

Materijal i metodi: U analizu su uključena 62 pacijenta koja su operirana različitim hiruškim zahvatima, a nakon indukcionog onkološkog tretmana.

Rezultati: Značajna statistička razlika je u učestalosti pojavljivanja između dvije najčešće vrste karcinoma (χ^2 test=25; p=0), kao i statistički značajna razlika u učestalosti pojedinih tipova karcinoma prema spolu (p=0). Fisher-ovim egzaktnim testom nije utvrđena statistički značajna zavisnost između vrste karcinoma i njegove osjetljivosti na hemoterapiju (p=0,2), kao ni statistička zavisnost hemoterapijske osjetljivosti u odnosu na spol (p=1). Hi-kvadrat testom nije utvrđena statistički značajna razlika u učestalosti vrste operacije u odnosu na tip karcinoma (χ^2 =1; p=0,6). Prisutna je statistički značajna pozitivna povezanost između broja dana provedenih na intenzivnoj njezi i broja dana provedenih na odjeljenju kod operiranih pacijenata (rho=0,63; p< 0,01), te statistički značajna zavisnost između odgovora na hemoterapiju i broja dana provedenih na intenzivnoj njezi (p=0). Utvrđena je statistički značajna zavisnost između vrste operativnog zahvata i broja dana provedenih na odjeljenju intenzivne i odjeljenju standardne njege (χ2=17; p=0 vs. χ2=11; p=0).

Zaključak: Evidentan je odnos vrste hiruškog zahvata i operativne tehnike na trajanje postoperativnog liječenja.

KLJUČNE RIJEČI:
karcinom pluća, indukciona onkološka terapija, vrsta hiruškog zahvata.

PROFESSIONAL PAPER

UDK 616.711-006

Percutaneus Biopsy of Spine Metastases

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ABSTRACT
Many malignancies in elderly population are firstly presented by spine metastases. Taking into account the complexity of metastatic diseases, it is very important to complete tumor staging and determine its pathohistology.
In this paper, we present a group of patients on which a percutaneous biopsy of tumor at the Department of orthopedics and traumatology in Sarajevo was made. Including factors were: X-ray, CT or MRI diagnosed spine metastasis of thoracic or lumbar spine of unknown origin. Needle biopsy in local anesthesia was performed on 25 patients in total, and on 21 of them, we confirmed histological metastatic disease (84%). Other four patients had inadequate material for analysis and we had to repeat the procedure. Spine surgery was indicated in 8 of 25 patients (32%). Metastatic disease advanced to the rest of them (68%) and they were only indicated with chemo/radio-therapy (low Tomitta score and short life expectancy).
Despite the presence of many metastases, the most symptomatic are spinal metastases. Therefore, other specialists expect orthopedic-trauma spine surgeons to be leaders of the team, although it should be oncologists. Percutaneous spine biopsy allows the acceleration of diagnostic procedure, and, as soon as possible, the beginning of definite therapy.

KEY WORDS:
spine, metastasis, biopsy, pathohistology, needle.

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Introduction

When traumatic spine fractures occur, we first think of osteoporotic or metastatic spine fractures. Reason for common localization of metastases in spine is the Baxter's plexus. Baxter's plexus connects drainage area of upper and lower cava vein, similar like azygos veins, from occiput to sacrum. It has no valves and intraabdominal pressure of toraco-abdominal space does not change pressure in it, since it is located mostly in vertebral bodies.

Stability of spine column can be reduced by a pathological process: osteoporosis, hemangioma, multiple myeloma, metastasis (prostate, kidney, breast, rectum, ventriculus). Pain is minimal at the beginning, and is increased after some event – sudden sitting down, falling in house, lifting of heavy object, etc.). Neurological symptoms appears latterly, when compression of medulla or nerve rots become extensive.[1]

Standard X ray imaging can present marked litic lesion (hemangioma) or irregular lesion (myeloma or metastasis). X ray imaging is positive just after 60% of bone mass is destroyed, and it is not reliable to differentiate an acute from chronic lesion. CT scan allows better visualization of facture geometry and relation of bone and medulla. It is also rather inconclusive regarding to fracture etiology (osteoporosis, benign or metastatic bone lesion). MRI presents real size of metastasis and its relation to the surrounding tissues (medulla, aorta, v. cava).[2-5] (Figure 1.) Scintigraphy is very useful for detecting and numbering of all metastasis in the body.

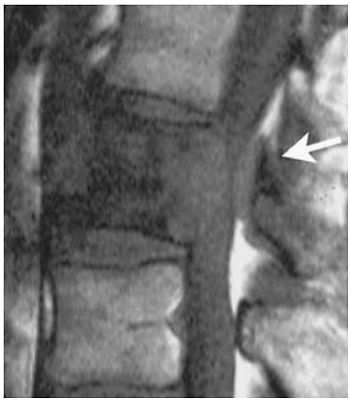

Figure 1. Metastatic destruction of L2 vertebra.

Metastatic spine disease is not related to the TNM tumor staging, or, in other words, metastasis can appear in all stages of TNM, regardless the life expectancy life expectancy. However, life expectance is factor which determines our treatment strategy.

For the patient whose general condition is bad and life expectancy is short, complex surgery is risky and unnecessary. In such circumstances, the aim of treatment is reduction of pain, prevention of spine collapse and neuro deficit. We also chose palliative procedures: vertebroplasty/posterior spondilodesis. Therefore, it is very important to analyze general condition of patient, level of pain, neurological status, tumor dissemination and its primary localization, and its pathohistology, and estimate his life expectancy and realize his expectations of our treatment. Quantification of all those factors is performed by Tomita score (Table 1.). Tomita score allows us to calculate patient's life expectancy according his pathohistological diagnosis, general and neurological status, presence of spine and other metastases, with 85% of reliability.

Table 1. Tomita score

Revised Tomita Score - RTS	0 points	1 point	2 points
general condition	weak	mid	good
neurologic cond.	weakness	paresis	normal
meta. in organs	untreatable	treatable	no
meta. in vertebras	≥3	1-2	no
other bone meta.	≥3	1-2	no
Pathohistology:			
lung, sarcoma, gaster, esophagus, pancreas			0 pts.
liver, cholecyst			1 point
Others			2 pts.
kidney, uterus			3 pts.
Rectum			4 pts.
breast, prostate, carcinoid, thyroid			5 pts.

According to the Revised Tomita Score – RTS we estimate life expectancy and consequently, a recommended treatment (Table 2.).

Table 2. Revised Tomita Score with life expectancy and recommended therapy

RTS points	Life expectancy (months)	Recommended therapy
0-8	0-6	no therapy; radio and chemoth., ev. percut. biopsy, orthosis; palliative th. (vertebroplasty, posterior spondylodesis, ev. decompression)
9-11	7-12	above mentioned th. in more aggressive form
12-15	13 and more	tumor excision (vertebro- or corpectomy, depended of involvment of pedicle; posterior and anterior spondylodesis), ev. adjuvant or neoadjuvant radio/ chemotherapy

In treatment of such hard medical conditions, the role of orthopedic surgeon is to provide tumor tissue for pathohistological analysis and operative treatment. Those two tasks can be accomplished as a outpatient in local anesthesia with C arm assistance (percutaneus biopsy of tumor with a concomitant vertebroplasty).[6]

The aim of this work is to present our results of performing this procedure and to describe its importance.

Patients and methods

Including factors were: X ray, CT or MR signs of pathological fracture of thoracic and lumbal vertebra of unknown origin. Twenty-five patients with mentioned criteria were directed to the Spinal department of Clinic for orthopedics and traumatology of Clinical centre University of Sarajevo from October 1st, 2008 to October 1st 2013. During this procedure patient is positioned in abdominal decubitus on the radiolucent surgical table. Operative field is prepared, one C arm is directed horizontally, second one vertically, so that, in each moment, an X ray technician can provide frontal and sagital X ray of targeted vertebra (Figure 2.).

Adherence to anatomical characteristics of each targeted vertebra is of the uppermost importance. Biopsy needle is penetrated into the vertebral body through working channels. Piece of tumor tissue is taken for the pathositological analysis. This procedure is about 10 minutes, long and the only term of its performing is that patient can lay on his stomach during the procedure.

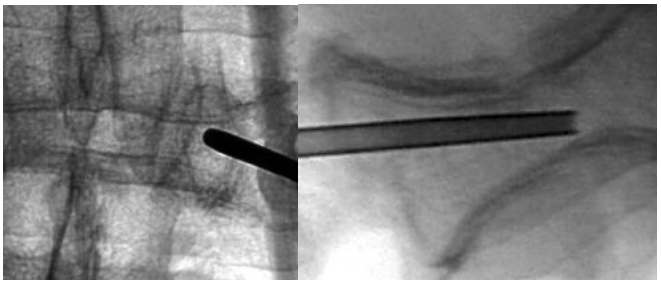

Figure 2. Intraoperative position of canilas through vertebra's pedicule.

Results

Biopsy was performed on 25 patients using the needle biopsy under C arm in local anesthesia. Positive pathohistological proof of tumor was at 21 of them (84%). Other four patients had unrepresentative tissue piece, and we had to repeat the procedure. After pathohistological diagnosis and tumor staging, surgical procedure was necessary only at 8 patients (32%), (Picture 3.) Other 68% of patients had no active spine surgical treatment because metastatic disease with more aggressive histological types advanced (G2). They were only indicated with radio/chemotherapy (low Tomitta score and short *life expectancy*).

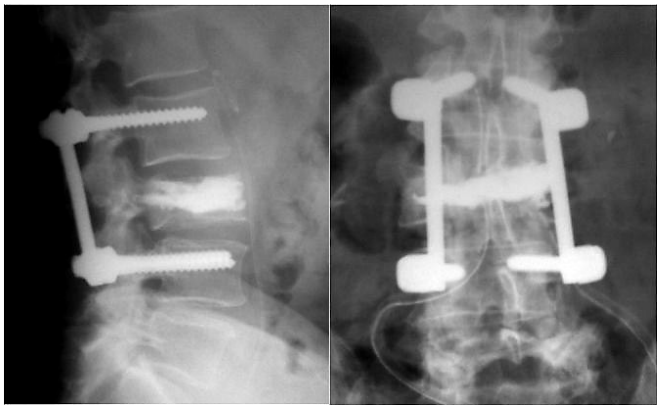

Figure.3. Combination of posterior spondylodesis and vertebroplasty of L3 vertebra metastasis.

Discussion

Bone metastases are 25 times more common then primary bone tumors. In clinical practice, bone metastases are detected in one third of patients with malignancy, and even in two thirds on the obductions. For instance, 27% patients with carcinomas have bone metastases, and vertebral bodies are vertebral bodies are parts of the skeleton which are most frequently caught. About 8% of patients with all malignances have spinal metastasis, most common being thoracic spine, about 70%, lumbal spine 20%.[7]

Bearing this in mind, we have to be highly suspicious of oncology patients with back pain - it is considered to be spine metastasis unless proven different. Maximum suspicion should be given to the presence of others clinical signs of malignoma (weight loss, grey or icteric face habitus, inapetence, long-lasting pain, respiratory, urinary or gastric problems). Concerning the seriosity of tumor diseases and spine fracture it is very important to complete as sooner as possible its TNM-G staging.

So far, a hospitalization of patient with malignancy on the clinic of orthopedics-traumatology, with performance of long lasting staging, including spine biopsy has been common practice. Staging includes further diagnostic procedures: standard and specific laboratory, chest X ray, echo of abdomen, spine CT, and eventually, CT angiography and spine MRI. Sometimes, more than a couple of weeks is needed for this procedure and, during that time, patient's condition becomes worse.

Minimally invasive procedures are the gold standard in all situations where they are feasible with high reliability. Therefore, for the last two decades, percutaneous spine biopsy in local anesthesia under C arm control which does not need classic preoperative patient's preparation has been recommended. This kind of material acquiring for pathohistology allows patients to be directly hospitalized on the Clinic for oncology, where they will get an adequate specialist report and oncological treatment. Involvement of spine (orthopedic-traumatology) surgeon is completed when he provides the material for PH analysis and prescribes an adequate spine orthosis. He can be engaged again if the patient's life expectancy is longer in order to plan and perform the procedure of decompression and stabilization.

Spine metastases at the patients of different age, TNM stage, pathohistology, neurological and general condition are unique therapeutic challenge with high complication rates. If life expectancy is short (3-6 mo.), and our strategy is to prevent further vertebral collapse and perform a biopsy, then vertebroplasty is most suitable. If life expectancy is longer (6-12 mo) the posterior spondylodesis is better. If we face acute neurological deficit caused by metastasis, an urgent local irridation, which is successful in about 80% of patients. All above mentioned procedures are relatively noninvasive and cause no higher morbidity. If the tumor is recommended solitary and has low level of aggressivity (G0, G1) then it is reasonable to perform more radical surgical procedure, aiming to eradicate a tumor, restaurate the stability of spine and achieve a full recovery. Those procedures consist of posterior or anterior vertebral resection with reconstruction with bone cement, polyethylene, metal spacers, endoprostheses, homotransplants, etc. [8-13] At hipevascular tumors (kidney and thyroid) it is necessary to perform preoperative embolisation of tumor. [14, 15]

Conclusion

Despite the presence of many other metastases, spinal metastases are most common symptomatic metastases. Therefore, an orthopedic-spine surgeon is expected to be the leader of consilium, organized for those patients. Percutaneous spine biopsy allows the acceleration of diagnostic procedure and, as soon as possible, the beginning of definite therapy.

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Perkutana biopsija tumora kičme

APSTRAKT

Mnogi maligniteti u starijoj životnoj dobi se prvo manifestuju patološkim lomom kičme. Obzirom na kompleksnost tumorskih oboljenja i ozbiljnost dijagnoze prijeloma kičme potrebno je što prije završiti stage-ing tumora i odrediti njegov histološki karakter. U ovom radu prikazujemo seriju pacijentata kojima je izvršena perkutana biopsija tumora u lokalnoj. Uključujući faktori su bili RTG, CT ili MR dokazani patološki lom torakalnog ili lumbalnog pršljena nepoznatog porijekla. Kod ukupno 25 pacijenta, iglenom biopsijom pod kontrolom C luka u lokalnoj anesteziji izvršena je biopsija, a kod njih 21 je potvrđen PH nalaz nekog od malignoma (84%). Kod ostalih 4 tkivni uzorak je bio nereprezentativan, i pretraga je morala biti ponovljena. Nakon dobivanja PH nalaza, od pomenutih 25 pacijenata u konačnici, zahvat na kičmi je bio indiciran kod samo 8 pacijenata (32%). Ostali su imali uznapredovalu metastatsku bolest sa agresivnijim tipovima tumora i njima je bila indicirana samo hemo i radioterapija (nizak Tomita score i kratak life expectancy).

Pored brojnih drugih metastaza, najčešća simptomatska metastaza je spinalna. Zbog toga se zahtjeva od ortopeda-traumatologa da preuzme vodstvo konzilija za liječenje ovih pacijenata, koje po prirodi stvari pripada onkologu. Perkutana biopsija tumora kičme omogućuje da se znatno ubrza obrada onkoloških pacijenata i što prije otpočne sa ciljanom onkološkom terapijom.

KLJUČNE RIJEČI:

metastaza, kičma, biopsija, patohistogija, igla

PROFESSIONAL PAPER

UDK 616.728.2-77

Total Hip Arthroplasty in Patients with Rheumatoid Arthritis

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ABSTRACT

Introduction. Total hip arthroplasty has become a successful way of treating the painful and destroyed hip joint in the patient with rheumatoid arthritis(RA).

Materials and Methods. Two hundred and twenty (135 cemented and 85 uncemented) total hip arthroplasties were performed on 180 patients with rheumatoid arthritis. The average age was 48,61 years and the average follow-up was 8,4 years. Clinical evaluation was based on a Harris hip score that showed significant improvement in pain and function preoperatively, compared with pain and function at follow-up. There were two deep infections that required removal of the prosthesis. Four cemented acetabular cups and one cemented femoral component were revised due to aseptic loosening. Three acetabular rings were revised due to aseptic loosening. The relatively inferior results of total hip arthroplasty among RA patients are due not only to fixation method, but also to the poorer bone quality and weakening musculature.

Conclusion. The results in these patients suggest that cementless total hip arthroplasty might become a successful way of treating the destroyed hip joint in the patient with rheumatoid arthritis.

KEY WORDS:
Total arthroplasty, hip, rheumatoid arthritis

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Introduction

Total hip arthroplasty is probably one of the most successful surgical procedures in patients with rheumatoid arthritis, both in terms of pain relief, and in terms of functional recovery of the patient. Despite the fact that patients with rheumatoid arthritis have lower weight and exhibit lower activity levels, it has been found in literature that there are generally worse results of implanting a total cemented hip endoprosthesis in patients with rheumatoid arthritis, as compared to the population of patients where total endoprothesis is implanted due to primary coxarthrosis. [1-4] In recent years, number of implantations of cementless hip endoprothesis has increased, but the follow-up period has been relatively short to be able to talk about their benefits with certainty at this point. In this paper, we have presented the results of the primary implantation of cemented and cementless total hip endoprosthesis in patients with rheumatoid arthritis, on the basis of which it may be suggested that cementless endoprosthetic systems have shown a slight advantage over the cemented endoprosthetic systems.[4-7]

Patients and Methods

Between the year 1992 and 2004 we implanted 220 total endoprothesis in 180 patients who had previously been treated against rheumatoid arthritis and where the primary disease was the main reason for the emergence of arthrosis. In 40 patients, total endoprothesis were implanted in both hips, of which 20 cemented and 12 cementless, while in 8 patients, a cementless prosthesis was implanted in one hip and a cemented prosthesis in the other. 135 cemented prosthesis and 85 cementless prostheses were implanted in total. Of the cementless hip

endoprosthesis, the anatomic porous ones coated with hydroxyapatite were used, type Kirschner, RCM, Zwey-Miller, Zimmer, whereas the cemented ones were type Charnley with low friction (Lima, Exeter, Bioimpianti, Zimmer). The cementing technique was the first generation. Access was only posterolateral. A single dose of antibiotics was administered intraoperatively. All patients received thromboembolic protection, although it was not the same in different time periods. The average age of patients who had a cemented endoprosthetic implant was 58.2 years (SD15.8 within the 48-78 age range), and in patients with cementless endoprosthetic implants it was 40.4 years (SD 16.0, within the 18-65 age range).

Bone quality of proximal femur at the time of surgery was noted according to Dorr classification.[5] All patients were monitored in our hospital, and radiographic hip check-up was performed once a year. The average follow-up period for the cemented prosthesis was 10.4 years and for the cementless 6.8 years.

Clinical assessment which referred to pain, function, deformity and range of motion was based on Harris evaluation system. [6,7] Radiographic assessment was performed at each check-up. Anteroposterior and lateral hip imaging was done as well. Demarcation of the acetabular component was evaluated using the zonal system of De Lee and Charnley.[8] A Gruen's zonal system was used (10) to assess the stem demarcation. Radiological loosening of the cap was defined as Hodgkinson type 3 or 4 capdemarcation. Loosening of the femoral component was noted in cases when there was more than 5 mm distal migration or settlement in the anteroposterior image or if there was a fracture of the cement or stem, or if the complete radiolucent line was wider than 2 mm.[9]

Results

All the patients had significant clinical improvement with respect to the pain, function and range of motion (Harris hip score, average preoperative 22.4, postoperative 78.5). Preoperatively, 160 patients had severe pain and only 20 a moderate pain. Postoperatively, 150 patients had no pain and 30 of them had mild pain or discomfort in the hip. Due to aseptic loosening, there were four acetabular cemented caps revisions, as well as one of the cemented femoral stem. In 4 acetabular caps there were initial signs of loosening, but no discomfort was felt. Stem subsidence up to 3mm was noted in 7 patients, but the follow-up showed no progression. Due to aseptic loosening, 3 acetabular ring revisions were performed and in all cases the stem was stable, well- fixed and intervention on the femoral component was not done. There were two deep infections due to which the endoprosthesis were later removed. In both cases, the cause was methicillin-resistant staphylococcus. Of other complications, there was a fracture of the femur below the stem which was resolved by a revision stem, as well as one endoprosthesis luxation, which was immediately repositioned and there were no repeated luxation later. Four patients developed pulmonary embolism in postoperative period, which was adequately resolved. Other complications were the following: development of thrombophlebitis in one patient, and secondary wound healing in three cases.

Discussion

The choice of implants for total hip arthroplasty remains subject to debate, especially for patients with rheumatoid arthritis. [1,10-12] Although these patients are usually younger than those with classical coxarthrosis, their bone mass is weaker due to two reasons: the first is considerable activity of the primary disease, the second is medication treatment, which mostly involves the use of non-steroidal anti-inflammatory drugs and corticosteroids. [3,5] It is considered that the results of total hip endoprosthesis implants in patients with rheumatism are worse in comparison with classical coxarthrosis, but cementless endoprosthesis have lately been implanted more often, and so far, the results have been promising. [10-14] However, it should be noted that the follow-up period was relatively short, and the process of osteointegration, i.e. the process of bone ingrowth into the cementless endoprosthetic system in patients with rheumatoid arthritis is quite debatable. Because of all this, the method of total hip endoprosthesis fixation in patients with rheumatoid arthritis is a significant problem, and a much more complex process than in other indicative cases. Another problem is that the majority of the series presented focuses mainly on one type of implant, so there are no comparative studies which would assist in resolving the controversy. In younger patients with rheumatoid arthritis, similar to other younger patients with primary coxarthrosis, loosening of the acetabular component is also present quite often, which is not the case with the femoral component. We also had greater loosening of the acetabular components than femoral ones in our series. There are different reasons for this. Poss and colleagues[5] suggest that the loosening of the acetabular component is due to the inability to establish normal acetabulum position in hips with acetabular protrusion. On the other hand, Severt et al. believe that the high degree of cement cap loosening is associated with the implantation of such systems in younger people.[11] There are also opposing views.[3]

Cementless implants, particularly the ones with hydroxyapatite, seem to produce better results. The only problem with this observation is that the follow-up period is still relatively short, hence the good results shown in different series do not exceed the follow-up period for more than 10 years. In our series, the cementless systems do well, only 3 acetabular ring revisions with no reintervention on the stem. Cemented systems have more loosening, but this applies mainly to the acetabular component .

Comparing the groups of patients with cementless and cemented endoprostheses, we came to the conclusion that better results were shown in the cementless group. Harris hip score was generally similar in these two groups preoperatively, but was significantly better in the cementless group postoperatively. The explanation for this was not found only in the implant type, but it was probably due to the younger age of the cementless group patients. This mainly refers to the acetabular component, while the femoral component does equally well in both cemented and cementless group of patients. Considering all present knowledge, we are close to the view that implanting cementless endoprosthesis to younger patients is appropriate, because there is less technical demand, less patient exposure, and there are fewer consequential revisions, which are currently largely inevitable.

Conclusion

It should be reminded that every arthroplasty has its lifespan and eventually leads to revision. The longevity of the implant in patients with rheumatoid arthritis, among other things, depends on the bone mass quality. Since rheumatoid arthritis is a disease that leads to the loss of bone tissue, the constant bone remodeling may compromise the bond between the cement and the bone and hence cause loosening, regardless of the quality of the initial cement penetration. Naturally, drugs used to treat rheumatoid arthritis contribute to all this too. Only if the process of bone tissue loss is stopped, a long-term survival of the implant can be expected, and by then, the results with cemented endoprosthetic systems are probably going to be worse. In the meantime, we believe that it is probably more appropriate to implant cementless endoprosthetic systems in young patients with rheumatoid arthritis.

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Totalna artroplastika kuka kod pacijenata sa reumatoidnim artritisom

APSTRAKT

Uvod. Totalna artroplastika kuka je postala uspešan način lečenja bolnog i uništenog zgloba kuka kod pacijenta sa reumatoidnim artritisom.

Ispitanici i metode. Mi smo uradili 220 totalnih artroplastika kuka kod 180 pacijenata sa reumatoidnim artritisom. Prosečna starost pacijenata je bila 48,61 godinu, a prosečno praćenje 8,4 godine. Klinička procena je bila bazirana na Harisovom skoru kuka koji je pokazao značajno poboljšanje, poredeći bol i funkciju preoperativno i postoperativno. Postojale su dve duboke

infekcije zbog kojih su endoproteze izvađene. Zbog aseptičnog razlabavljenja urađene su revizije na 4 cementne acetabularne kape i jednoj cementnoj femoralnoj komponenti. Zbog aseptičnog razlabavljenja urađene su 3 revizije acetabularnog ringa. **Zaključak.** Kod pacijenata sa reumatoidnim artritisom relativno lošiji rezultati totalne artroplastike kuka postoje ne samo zbog načina fiksacije, već i zbog lošijeg kvaliteta kosti i oslabljene muskulature. Rezultati kod ove grupe pacijenata sugerišu da bescementna totalna artroplastika kuka može postati uspešan način lečenja razorenog zgloba kuka kod pacijenta sa reumatoidnim artritisom.

KLJUČNE REČI:
Totalna artroplastika, kuk, reumatoidni artritis

PROFESSIONAL PAPER

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Traffic Traumatism Resulting in Deadly Consequences in the Region of Banjaluka

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ABSTRACT

Introduction: Traffic accidents are a global problem, in which over 1.2 million people on the planet are killed annually. Detailed consideration of these issues is necessary in order to take appropriate preventive measures.

Patients and methods: In this retrospective study we used the material of the Department of Forensic Medicine Banjaluka. We have analyzed the data of autopsies of people killed in traffic accidents during the period of 2010 - 2012. We examined the gender and age distribution, type and distribution of injuries, the cause of death for certain groups of participants in traffic, and the presence of alcohol in the victims. Data on the alcohol use were obtained from the Forensic Unit of Ministry of Internal Affairs of Republic of Srpska (gas chromatography).

Results: Of 186 autopsied, 160 (86%) were male and 26 (14%) women. Two particularly vulnerable groups were the third decade of life and older age. Head injury is the most common cause of death (45.7%). Drivers (32.3%) and pedestrians (28%) were the most common victims, and in both groups the leading cause of death was head injuries. Their distribution of injuries is similar, with more frequent injuries to the spine, pelvis and lower extremities of pedestrians.

Conclusion: Victims are more frequently men, and out of 60 victim drivers 58 were male! Is it because of the higher incidence of men in the group of drivers and also their behavior in traffic? Number of victim drivers probably was something higher, but unfortunately, in some cases the prosecution is not seeking for the autopsy. Of the total number of victim drivers, 41.7% belonged to the third decade of life. The most common cause of death was head injury. The two most vulnerable groups are drivers and pedestrians, with dominant head and chest injuries. Alcohol abuse is a significant part of the problem. Results of this study generally do not deviate from the data found in theworld literature.

KEYWORDS:
Victims of traffic accidents, autopsy, cause of death, head injuries

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Introduction

As a side effect of the expansion of traffic there was a problem of traffic traumatology, which has long since reached the proportions of global epidemic.Over 1.2 million people are killed in traffic accidents worldwide per year, while the number of injured is up to 50 milions.[1, 2] In developed countries in recent years there is a tendency to reduce the number of casualties in traffic accidents.[3] In developing countries, pedestrians make up nearly 40% victims, while in some parts of Africa the percentage goes up to 55%.[4] Approximately half of all victims are pedestrians, cyclists and motorcyclists, the three most vulnerable groups

of traffic users, which is also more evident in the less developed countries.[5-8]

The aim of the study to consider the representation of deaths and specificity of injuries in certain groups of traffic participants and to identify risk groups. These information are necessary for the design and taking any preventive actions aimed at increasing of traffic safety and reducing the number of casualties.

Patients and Methods

In this retrospective study we used the data from autopsy reports of deceased participants in traffic accidents, autopsied at the Department of Forensic Medicine of Republic of Srpska in Banjaluka, in the period of 2010 – 2012. We examined the genderand age distribution of the deceased, the type and distribution of injuries, and the cause of death for certain groups of traffic users. The research included serious injuries which, according to the characteristics and localization, directly or indirectly endanger lives of the injured. The Criminal Law of Republic of Srpskaclassifiesthese injuries as severe or qualified form of severe body injuries.[9] Superficial injuries of the skin and subcutaneous tissue (abrasions, bruises, contusions, lacerations), which were numerous in almost all victims, were not the subject of this study, as they are of importance in determining the mechanism of injury, but have an insignificant effect on the mechanism of death.

Results

Out of a total of 462 autopsied during the observed period, 186 (40.2%) were fatally injured traffic users; 160 (86%) men and 26 (14%) women. In relation to the type of traffic users, most of fatally injured were drivers (total of 60, of whom 58 men!), followed by pedestrians (52, 14 of whom were women), front seat passengers (28), rear seat passengers (16), motorcyclists (14), cyclists (13) and three tractor drivers. According to the age there were two noticeable peaks:the third decade of life and older age (the seventh decade and older).

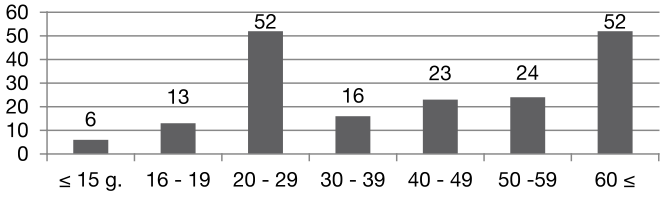

Figure 1. Distribution of victims according to age

From a total of 60 fatalities of drivers, 25 or 42% were aged 20 -29 years (figure1). Generally speaking for all participants, the most common cause of death were head injuries (46%), followed by polytrauma (26%) and chest injuries (24%). Among other causes (< 5%) were abdominal injuries and asphyxia. The two main groups of fatally injured traffic users were drivers (32%) and pedestrians (28%). Co-drivers have a similar distribution of injuries and causes of death. Of 28 died co-drivers, in 12 cases the cause of death was head injury andin 11 cases chest injuries, which are the most frequently injured body parts. Out of 60 fatally injured drivers, in 47 of them blood alcohol concentration at the time of the accident was measured. Of these, 26 (55%) had a blood alcohol concentration above the legal limit (more than 0.3‰ for drivers). Of 52 pedestrians killed, in 39 of them alcoholemia was measured. In 22 (56%) of pedestrians the illegal blood alcohol concentration was found (over 0.8 ‰ for pedestrians).

Discussion

Men are more frequently victims (85%), which could only partly be explained by their greater participation in traffic. In the world literature such drastic gender distribution was registered in the work of Indian authors, the population of New Delhi.[10] The fact that out of 60 died drivers, 58 are male, and only two women, perhaps tells the story about the behavior of male drivers in traffic. Nearly half of the killed drivers are in the third decade of life.

Studies conducted globally show that the number of pedestrian deaths in traffic accidents varied significantly and were inversely proportional to the development level and economic well-being of society. In highly developed countries, pedestrians make up about 15% of the total fatalities in traffic accidents, in middle developed countries about 29%, while in some African regions even 55% of the total number of dead traffic participants.[5, 6] Inour study, pedestrians make up 28% of the total number of deaths in traffic accidents.

Increased representation of casualties among the elderly could be explained by their reduced dexterity, agility, concentration, attention and generally weaker immunity to trauma. However, to explain the increased number of casualties in the third decade of life, it would be necessary to take into account the temporal distribution of injury (days of the week, time of day or night), the role of alcoholism and intoxication, and possibly link it to risky behavior modes.

The most common cause of death among drivers and pedestrians is head injury, followed by polytrauma and chest injuries, which is in line with numerous researches.[11-13] This confirms the view thathead of pedestrians, in spite of improvements in protection systems and stricter legislative regulations, remainsinsufficiently protected.[14-18]

Conclusion

Drivers and pedestrians are the two most vulnerable groups, with a similar distribution of injuries on the body.

While unfatally injured pedestrians have a certain peculiarities of injuries, which separates them from drivers, in case of death injury these differences fade. However, it is noticeable that abdomen and upper extremities are injured more frequentlyin drivers, while head, spinal column, pelvis and lower limbs are more affected in pedestrians More than a half of died drivers and pedestrians were under the influence of law prohibited blood alcohol concentration at the time of injury.

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Saobraćajni traumatizam sa smrtnim posljedicama u Banjalučkoj regiji

APSTRAKT

Uvod: Saobraćajne nezgode su globalan problem, u kojima godišnje smrtno strada preko 1,2 milona ljudi na planeti. Detaljnije sagledavanje ove problematike neophodno je radi preduzimanja adekvatnih preventivnih mjera.

Ispitanici i metode: U ovoj retrospektivnoj studiji upotrebljen je materijal Zavoda za sudsku medicinu u Banjaluci, obdukovani nastradali u saobraćajnim nezgodama u periodu 2010. - 2012.g. Posmatrane su polna i starosna distribucija, vrste i distribucija povreda, uzrok smrti za pojedine grupe učesnika u saobraćaju, te prisustvo alkoholisanosti kod nastradalih. Podaci o alkoholisanosti pribavljeni su od Jedinice za forenziku MUP RS (gasnom hromatografijom).

Rezultati: Od 186 obdukovanih, 160 (86%) je muških, 26 (14%) ženskih. Treća decenija života i starija životna dob su posebno ugrožene grupe. Povreda glave je ubjedljivo najčešći uzrok smrti (45,7%). Vozači (32,3%) i pješaci (28%) najčešće stradaju, a kod obe grupe vodeći uzrok smrti je povreda glave. Njihova distribucija povreda je slična, uz češće povređivanje kičme, karlice i donjih ekstremiteta kod pješaka.

Zaključak: Muškarci stradaju znatno češće, a od 60 poginulih vozača, 58 je muških! Da li zbog veće zastupljenosti muških u ovoj grupi ali i ponašanja u saobraćaju? Broj stradalih vozača vjerovatno je i nešto veći, nažalost, u pojedinim slučajevima tužilaštva ne traže obdukciju. Od ukupnog broja poginulih vozača, 41,7% pripada trećoj deceniji života.Povreda glave je najčeši uzrok smrti. Dvije najugroženije grupe su vozači i pješaci, sa dominantnim povredama glave i grudi. Zloupotreba alkohola predstavlja značajan dio ovog problema. Rezultati iz ove studije uglavnom ne odskaču od svjetske literature.

KLJUČNE RIJEČI:

Žrtve saobraćajnih nezgoda, obdukcija, uzrok smrti, povreda glave

PROFESSIONAL PAPER

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Burnout Syndrome and Self-efficacy Among Nurses

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ABSTRACT

Introduction. The aim of this research was to investigate the presence and level of relationship of burnout dimensions with perceived general self-efficacy in relation to the length of service of nurses. Participants were nurse employees of a Cantonal Hospital „Dr.Irfan Ljubijankić" Bihać (N=102) who work directly with patients.

Materials and Methods. Maslach burnout inventory MBI-HSS. was used to test burnout in the workplace. Generel self-efficacy was measured by a short version of the original general self-efficacy scale by Schwarzer et al.

Conclusion. Research results indicate low level of burnout in the workplace with a tendency towards moderate. More specifically, moderate emotional exhaustion, low depersonalization and high personal accomplishment. Perecived self efficacy is associated with depersonalisation (r_s= -0.26, p<0.05) and personal accopmlishment (r_s=0.41, p<0.05), whilst intention to change profession is affected by perceived self efficacy, emotional exhaustion and personal accomplishment.

KEY WORDS:
burnout syndrome, self-efficacy, intention to change profession

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Introduction

Burnout syndrome, as defined by Christina Maslach, one of the most famous researchers of this phenomenon in the United States, is „psychological syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment, which usually occurs in people who are somehow working with other people".[1] Thereby, emotional exhaustion refers to feelings of emotional overload and job exhaustion, while reduced personal accomplishment and depersonalization relates to the negative evaluation of the self and others. Medical professions are, due to specific working environments, psychologically, emotionally and physically enormously demanding. Understanding burnout and its impact on medical personnel is important to all medical institutions in order to appropriately approach, eliminate or mitigate existing or prevent detrimental burnout effects which appear in a form of physical or psychological health problems, work inefficiency, lessened motivation to perform daily tasks, worsening relations with work environment and low life quality in general.[2,3] Given the amount of the time spend at the workplace and daily communication with nurses, from the perspective of physicians it is useful to know whether burnout syndrome is present among them and how it manifests. An adequate nursing staff and support at all levels within the organization, which is the key to quality patient care, reduces the level of dissatisfaction and occupational burnout and intention to leave medical institution.[4] Shwarzer et al.[5] in their survey found that one of the significant individual resources that reduces burnout is perceived self-efficacy, which represents the belief that a person has an ability to organize and perform the actions necessary to accomplish the desired outcomes.

The aim of this study was to investigate the presence, degree and correlation of burnout dimensions, and the relationship with perceived self-efficacy in nurses employed in the Cantonal Hospital " Dr. Irfan Ljubijankić " in Bihac. The intention to resign medical profession in

relation to the dimensions of burnout and perceived self-efficacy was also investigated.

Patients and Methods

A questionnaire with clear instructions about research purpose and privacy policy was distributed to participants. It has been noted that all individual data will be protected, and not shared with participants' superiors and colleagues. The survey was voluntary and anonymous. The questionnaire consisted of Maslach burnout inventory MBI-HSS [1], the general self-efficacy scale[5] and demographic questionnaire related to personal and social status characteristics such as gender, age, education level and work experience. In addition, respondents were asked to estimate their personal intention to resign the profession and most disturbing factors at their workplace. After establishing satisfactory psychometric properties of the scales and performing descriptive analysis, due to the asymmetry of the distribution of the collected data, Spearman's Rank correlation coefficient and Mann Whitney U – test was used.

Maslach burnout inventory MBI-HSS (Maslach Burnout Inventory for Human Service Survey) consists of 22 items phrased as statements about personal feelings and attitudes, which is self-scored on a seven-point frequency scale, ranging from 0 (never) to 6 (every day). The three subscales of the MBI-HSS include Emotional Exhaustion (nine items; e.g. "I feel burned out from my work."), Depersonalization (five items; e.g. "I feel I treat some recipients as if they were impersonal objects"), and Personal Accomplishment (eight items; e.g. "I have accomplished many worthwhile things in this job"). High scores on Emotional Exhaustion and Depersonalization and low scores on Personal Accomplishment are indicative of burnout. The subscales represent a related (EE-Emotional Exhaustion and DP- Depersonalization) and independent (PA-Personal Accomplishment) but separate multidimensional concept of the burnout construct.

The scale of general self-efficacy measures general and stable sense of personal efficacy in dealing with a variety of stressful situations. The scale contains 10 statements. Each statement is assessed on a 1–5 Lykert type frequency scale, where 1 means "does not apply to me" and 5 "fully applies to me." Totals score are formed as a linear combination of the estimates. Scales internal consistency, Cronbach alpha for MBI-HSS was 0.78 and for general self-efficacy scale 0.91.

Results

Total of 102 respondents participated in this study (N=102), 87.3% were females and 12.7% males. The average age was 35 years (min. 23 and max. 60) and the average length of service (work experience) was 15 years (and min. 2 max. 40).

Results on burnout dimension scale show moderate emotional exhaustion (M=18.71, SD=10.54), low depersonalization (M=3.22, SD=3.83) and high personal accomplishment (M=42.00, SD=7.90). This indicates a low to moderate level of burnout. Out of total 102 participants, 45.01% reported moderate emotional exhaustion, 77.61% low depersonalization and 87.34% of the high job fulfillment. Research results also indicate that there is statistically significant correlation between emotional exhaustion and depersonalization dimensions with high coefficient of r_s =0.554 ($p<0.01$), where higher levels of emotional exhaustion are accompanied by higher levels of depersonalization. When it comes to nurses' perception of own self-efficacy, slightly more than half of the participants perceived high self-efficacy 55.08% (N=54), while 48.96% (N=48) self assessed low self-efficacy. The existence of relationship between self-efficacy and the two burnout dimensions has been confirmed. Statistically significant negative correlation between low self-efficacy and dimensions of depersonalization (r_s = - 0.26, $p<0.05$) is indicated by research results whereas, participants who perceived higher levels of self-efficacy have lower depersonalization and vice versa. Also, results indicate that self-efficacy is moderately associated with job fulfillment (r_s= 0.41, $p<0.05$), in a way that participants with high self efficacy perceive higher personal accomplishment.

Table 1. Results of the Mann Whitney U-test regarding burnout dimensions, perceived self- efficacy and intention to change profession among nurses

Perceived self efficacy	Intention to change profession	Burnout dimensions						
		Emotional Exhaustion			Depersonalization		Personal accomplishment	
		N	Midle rank	p	Midle rank	p	Midle rank	p
Low	No	34	23.54	0.630	23.50	0.667	24.34	0.042*
	Yes	11	21.32		21.45		18.86	
High	No	34	23.62	0.018*	24.29	0.044	34.25	0.000**
	Yes	20	34.10		32.95		16.02	

Note: Statistically significant differences * $p < 0.05$; ** $p < 0.01$

In regard to intention to leave medical profession (Table 1.) in relation to perceived self-efficacy and burnout dimensions the results indicate that high self efficacious participants with a tendency towards higher emotional exhaustion show a greater intention to change profession than participants with lower emotional exhaustion.

Participants with high level of self-efficacy who find their job fulfilling, to the greatest extent do not intend to leave the job. And participant who are low in self efficacy, and who report higher fulfillment in work, to the greatest extent do not have intention to leave the job.

Participants reported that they are mostly troubled at work by bad interpersonal relationships (55.92%) and inadequate allocation of tasks/duties (29.41%).

Discussion

Results of this study indicate that surveyed nurses experience moderate emotional exhaustion and job overload. According to Brudnik,[6] emotional job demands are a major factor in the perception of excess work strain. Research of Aguir-Escriba at al.[7] suggests that nurses are more prone to emotional exhaustion if they are exposed to increased psychological demands, with low control over the performance of the work and low support from supervisors and colleagues.

Low depersonalization indicates that there has been no change in relation to patients. Nurses still have interest in patients and are willing to help them. Perceived job fulfillment through personal achievement indicates that surveyed nurses feel competent and successful in their work with patients and possess enthusiasm for the work they do. Perceived self-efficacy as an important factor of belief in their ability to organize and accomplish desired goals is reported by most of the surveyed nurses. However, significant percentage of participant who are not convinced in own, aforementioned capabilities, considering the low, but statistically significant, correlation with depersonalization, should not be ignored. Results of Ebling and Carotta's[8] study on the relation between self-efficacy and professional dimensions of burnout have been partially confirmed. In our study, relationship between association of depersonalization and personal accomplishment with self-efficacy has been confirmed, in way that nurses with high self-efficacy experience more personal achievements, and lower levels of depersonalization. Self-efficacy may be an effective moderator of burnout, because it prevents the loss of professional satisfaction, reduces exhaustion and depersonalization tendency (Ogresta et al.).[9] When it comes to intention to leave the profession, personal achievement or sense of fulfillment with a job play important role as well. Nurses who perceived themselves as self efficacious also estimated themselves as more competent and successful in their work with patients. Self-efficacy is an important moderator in occupational burnout syndrome. Results found by Grau et al.[10] suggests individuals with low self efficacy are more vulnerable to suffer from this syndrome. The intention to leave the profession is significantly affected by the feeling overloaded with work, job fulfillment and self-efficacy .[11] Our findings suggest that nurses who are more fulfilled with the work they do, do not intend to leave the medical profession, regardless of whether they perceive themselves high or low self-efficient.

Conclusion

Research results indicate that it would be desirable to work on raising the level of self-efficacy, balancing task distribution at work and improving the organizational climate, in order to prevent professional burnout. Therefore organizing various educational workshops to help medical personnel get acquainted with the factors of burnout, as well as workshops with emphasis on increasing feelings of self-efficacy, which we found to be associated with the syndrome of burnout in the workplace, would be of utmost importance to prevent burnout and improve job satisfaction. In addition it would be highly desirable to develop human resources department/human resources teams within medical facilities which would, among other things, facilitate individual and group counseling, work to improve the organizational climate, examine and monitor employee needs and develop training programs in accordance with the needs identified.

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Sindrom sagorijevanja na poslu i samoefikasnost kod medicinskih sestara

APSTRAKT

Uvod. Cilj ovog istraživanja bio je ispitati stepen prisutnosti i povezanost dimenzija sagorijevanja na poslu sa percipiranom samoefikasnošću i intencijom napuštanja profesije kod medicinskih sestara (N=102) zaposlenih u Kantonalnoj bolnici „Dr. Irfan Ljubijankić" Bihać.

Materijal i metode. Za ispitivanje sindroma sagorijevanja na poslu korišćen je Maslach inventar sagorijevanja na radnom mjestu MBI-HSS. Opšta samoefikasnost je mjerena skraćenom verzijom originalne skale Schwarzera i sar.

Zaključak. Rezultati ukazuju na umjerenu emocionalnu iscrpljenost, nisku depersonalizaciju i visoko lično postignuće. Ispitanici u uzorku imaju nizak stepen sagorijevanja na poslu, sa tendencijom ka umjerenom. Percipirana samoefikasnost je povezana sa depersonalizacijom (r_s = -0.26, p<0.05) i ličnim postignućem (r_s =0.41, p<0.05). Na namjeru napuštanja profesije utiču percipirana samoefikasnost, emocionalna iscrpljenost i lično postignuće.

KLJUČNE RIJEČI:

Sindrom sagorijevanja na poslu, samoefikasnost, namjera napuštanja profesije

CASE REPORT

UDK 616.718.7-007.2-053.4

Reconstruction of the Third Phalanx of the Subamputed Ring Finger of a 10-year-old Girl

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ABSTRACT

A ten-year-old patient came under the observation of the U.O. OrtopediaUniversitaria of the A.O.U. Policlinico Santa Maria AlleScotte. She reported the following diagnosis: hyperflexion of the third phalanx of the left hand fourth finger, with hypogenesis of the third phalanx. As the first of the three surgical phases proposed, the patient underwent the retensioning of the long flexor tendon of the fourth finger and kinesis exercises in order to rehabilitate the phalanx correctly.

KEY WORDS:

Child, paediatric, flexor tendon, retensioning, ring finger, hypogenesis of the third phalanx, hand.

DOI: 10.7251/SMD1401029M

(Scr Med 2014:45:30-32)

Introduction

Finger injuries are common in children, especially during preschool age. Although they are not life-threatening, they often cause physical and emotional suffering and the inability to perform routine activities such as eating, playing and school work. Moreover, they can entail psychological trauma, deformity and sometimes a heavy expenditure for the family. Parents are usually concerned not only about the problem itself, but also about possible long-term functional and aesthetic consequences as well as financial implications. The incidence is highest in children and boys in the case of isolated finger injuries.[1] The severity of the trauma can vary significantly according to the complexity of the lesions and there can also be complications such as soft tissue lacerations, avulsion lesions, fractures and often amputation. Complex lesions are not frequent, but they require specialised medical care and financial resources from the National Health Service.[2]

Case Report

A ten-year-old patient comes under our observation with a diagnosis of hyperflexion of the distal phalanx of the left hand fourth finger (Figure1).

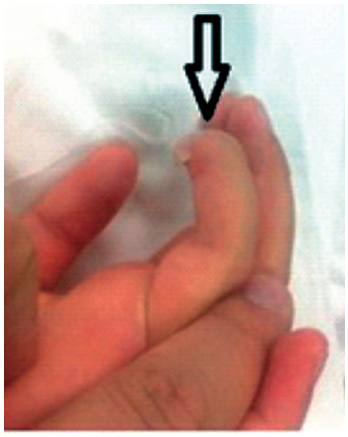

Fig.1: The fourth finger before the surgery the fourth finger in LL

At the age of ten the patient put her left hand into the gears of a water pump while playing with it in her house and suffered an injury of the distal phalanx of the left hand fourth finger, and the cicatricial effects caused hyperflexion of the fourth finger. At the nearest hospital, the decision was not to intervene, whilst at a hand surgery centre, the amputation of the third phalanx of the fourth finger was suggested.

A magnetic resonance was performed indicating that the fourth finger of the left hand did not show signal alternations of the flexor tendon and the skeletal elements. The radiography of the third phalanx of the fourth finger showed a 99° angle of hyperflexion with a remarkable hypogenesis of the third phalanx of the left hand fourth finger. At the physical examination the finger appears hyperflexed with arched nail (Fig.1.), visually more similar to a hook than a finger. The articulation was stabilised using the Kirschner wire of this articulation.

Discussion

Hand finger injuries are very common in children. Their management requires particular attention since it is of primary importance to recover the finger without further damages of the neurovascular and tendon structures underneath. The operation was performed through a peripheral block at the armpit level, with the patient under sedation. We started from a V-incision of the cutis of the flexor surface at the F2 and F3 level of the left hand fourth finger. The flexor tendon was transposed and then a Z-tenotomy was performed. Furthermore, we made a volar capsulectomy of the distant interphalangeal joint. At the end of the operation we performed a cutaneous plastic surgery with a free graft on the F2 and F3 articulation of the left hand fourth finger. The graft was taken from the flexor surface of the left wrist. The area from which it was taken was sutured using intradermal wire. At the end of the operation we made gauze dressing and the finger was positioned in hyperextension using simple tongue depressor and PIC gauze. Four days after the surgery, the patient was treated with gauze dressing and a Zimmer splint. On the tenth day we removed the stitches, the graft was well taken, we covered the wound with a sterile strip and disinfected with Betadine. The patient noticed the aesthetic improvement and asked to see the pictures of her finger, already happy with the result. Thirty-five days after the surgery, the Kirschner wire was removed and a splint was applied in hyperextension. At the physical examination we noticed that the distal phalanx was still affected by dysmorphism, and it was now longer than that of the left hand fifth finger, the cutis graft was in good condition, the nail showed an excellent trophism, and there was a remarkable hypomobility of the metacarpus-first phalanx fourth ray articulation and of the F1-F2 and F2-F3 articulations. The finger did not show any loss of degrees with respect to the physiological extension (Fig.2).

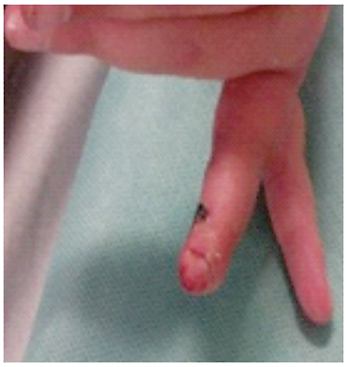

Fig. 2: Thirty days after the surgery

At the end of the clinical control, the parents were shown how to direct the patient to perform exercises for the flexo-extension of the articulations of the fourth finger and the metacarpus. The next check-up was in six months. After six months, the patient could flex the finger freely. Once the growth is completed we will intervene to restore the normal length of the fourth finger by lengthening the second phalanx with an external fixator [3] and, third and last intervention, to recover the aesthetic appearance of the finger.

These kinds of injuries can usually be prevented, if not avoided. It is very important that parents make the domestic environment safer for children and adopt more security measures. Parents play a crucial role in preventing unintentional injuries in children through a wide variety of interventions.[3-5]

One of the most important aspects for the patient, after the functional and aesthetic recovery, was the thought of being able to wear a wedding ring on the left hand fourth finger.

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Rekonstrukcija semiamputirane distalne falange četvrtog prsta kod desetogodišnje djevojčice

APSTRAKT
Desetogodišnja pacijentica je došla u polikliniku Santa Maria Alle Scotte. Dijagnostikovana je hiperfleksiia distalne falange četvrtog prsta lijeve ruke sa hipogenezom treće falange. Kao prva od tri predložene hirurške faze, rađena je retencija fleksorne tetive četvrtog prsta i predložena je fizikalna terapija u trajanju od 6 nedelja da bi se korigovao deformitet prsta i da bi prst povratio punu funkciju.

KLJUČNE RIJEČI:
Dijete, pedijatar, fleksorna tetive, hipoplazija treće falange, ruka.

CASE REPORT

UDK 617.735-089

Bullous Exudative Retinal Detachment in Eclampsia

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ABSTRACT

Retinal detachment is a rare complication of hypertensive disorders in pregnancy. It affects 1% of women with severe preeclampsia and 10% of women with eclampsia. In most cases, spontaneous resolution occurs in few weeks, usually without sequels. We present a case of 39-year-old primipara with eclampsia, who developed bilateral serous retinal detachment three days before delivery. After delivery by Caesarean section and the establishment of normal values of blood pressure, spontaneous resorption of subretinal fluid occurred and visual acuity progressively returned to normal.

KEY WORDS:

exudative retinal detachment, eclampsia, arterial hypertension

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Case Report

A 39-year-old primipara (in which the pregnancy is a result of in vitro fertilization) was hospitalized at the Clinic of Gynecology and Obstetrics, Clinical Center of Banja Luka in the 33rd week of pregnancy due to edema of the lower extremities, low protein levels and arterial hypertension. Pretibial edema was found, total serum protein 55 g/L, albumin level 25 g/L, proteinuria 3g/24 hours, AST 114 U/L and gamma GT 56 U/L. The highest measured value of blood pressure amounted to 210/150 mm Hg.

The patient is examined by cardiologist, hematologist, nephrologist, pulmonologist, gastroenterologist and an ophthalmologist. She was treated with human albumin, inhibitors of DOPA decarboxylase (methyldopa) and calcium antagonists (nifedipine). ACE inhibitors were not applied due to the potential fetal toxicity.

At the first examination of ophthalmologist, in the 33rd week of pregnancy, hypertensive changes in the blood vessels of the retina are recorded (fundus hypertonicus grade II/III). Three days after the first examination the patient felt a sudden decrease of vision in both eyes. Visual acuity in both eyes amounted to 1/60 and continues to decrease. Using direct and indirect ophthalmoscopy and ultrasonography diagnosed bilateral bullous exudative retinal detachment. Optical coherence tomography (OCT) and fundus photography (FF) were not done because the patient was in very severe general condition.

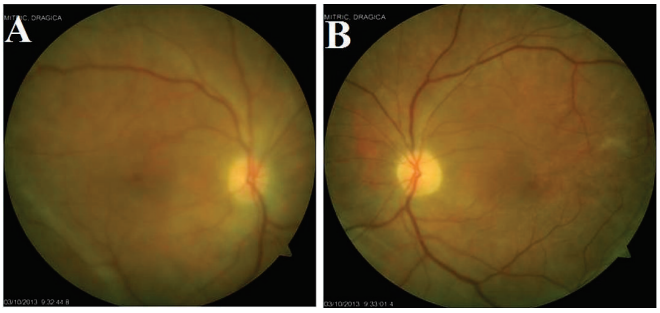

Figure 1. Fundus photographies of right A) and left B) eyes , 10 days after delivery showing exudative retinal detachment

In the 34th week of pregnancy, delivery was terminated by Cesarean section indicated by cardiologists and gynecologists because of severe general condition and pleural effusion. On examination, three day postpartum, her

visual acuity in both eyes was very bad-feeling light with projection (L+P+).The tenth day postpartum FF **(Figure 1)** and OCT **(Figure 2)** were done and diagnostic evaluation was completed. Establishment of normal values of blood pressure leads to a gradual spontaneous resorption of subretinal fluid and visual acuity returns to normal.

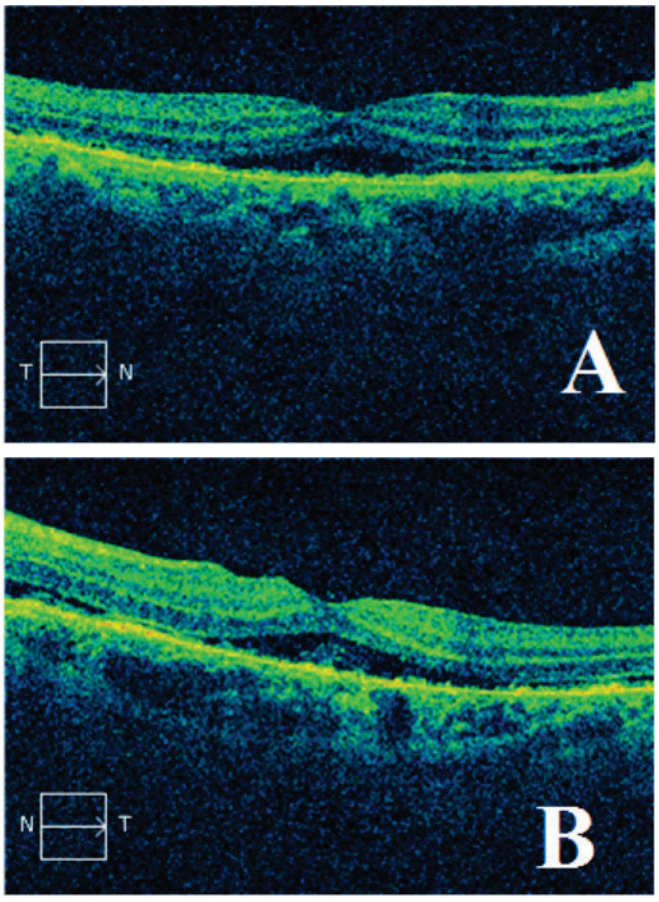

Figure 2. OCT of right A) and left B) eyes, 10 days after the delivery shows exudative retinal detachment

Discussion

Eclampsia is the most severe form toxicosis in pregnancy. It occurs at the end of pregnancy or during delivery. Primiparas, women with a multiple pregnancy, diabetes, obesity and hypertension are at higher risk of developing eclampsia.

This condition occurs in 3-5% of all pregnancies and is the leading cause of maternal mortality in developed countries (the maternal mortality rate is 2%).[1] It continues to preeclampsia, which is characterized by hypertension (>140/90 mm Hg), proteinuria (> 300 mg/day) and pretibial edema. In eclampsia systolic pressure is > 200 mm Hg, oliguria can progress to anuria, resulting in generalized edema, and in the most severe cases occur tonic-clonic convulsions.

During preeclampsia and eclampsia occurs arteriolar vasoconstriction, particularly of the vessels of the retina, kidneys and splanchnic region. In 50% of patients with preeclampsia have been reported visual disturbances: blurred vision, photopsia, diplopia, disturbance in the visual field, and in severe cases total blindness occurs.[2] Although visual disturbances are quiet common, complete blindness is rare, with an incidence of 1-3% and may be due to the involvement of the occipital cortex, retina (hypertensive retinopathy, edema, serous retinal detachment), or optic nerve (acute ischemic optic neuropathy).[3]

Serous retinal detachment was first described by von Graefe in 1885. It has been reported in 1% of patients with severe preeclampsia and in 10% of patients with eclampsia.[4] It is characterized by the separation of the neurosensory retina from the retinal pigment epithelium (RPE). Is considered that endogenous vasoconstrictor agents leak freely from the choriocapillaries and act on the walls of the choroidal vessels resulting in choroidal vasoconstriction and ischaemia.[5] Subsequently ischaemia of the RPE causes degradation of the outer blood-retinal barrier and formation of a serous proteinaceous exudate from the choroid, through the RPE, into the subretinal space, producing serous retinal detachment.[6] In most cases, after delivery and regulation of arterial blood pressure leads to spontaneous resolution. Accumulated subretinal fluid is resorbed by active transport across the retinal pigment epithelium (RPE) and by passive hydrostatic and oncotic forces that work most effectively when the RPE barrier has been damaged. Visual acuity usually returns to normal within a few weeks. Some patients may develop residual macular RPE change, in form of Elschnig's spots. These changes can mimic a macular dystrophy or tapetoretinal degeneration.[7] Rarely, due to extensive chorioretinal ischemia can occur optic atrophy.

In the treatment of exudative retinal detachment in eclampsia is most important to make delivery as soon as possible and implement measures that will lead to the normalization of blood pressure by using the most effective combinations of antihypertensive drugs: inhibitors of DOPA decarboxylase (methyldopa) and calcium antagonists (nifedipine). ACE inhibitors (captopril) are recommended after delivery. In severe cases, it is necessary to administer sedatives, hypnotics and spasmolytics. It is necessary to remove salt, fats and proteins initially.

All these measures and therapeutic procedures will lead to the absorption of the subretinal fluid, retinal reattachment and recovery of visual acuity. Treatment of exudative retinal detachment in patients with eclampsia requires prompt response, constant monitoring of all valid parameters for this condition (body weight, blood pressure, diuresis and proteinuria). Teamwork of specialists of all relevant branches, primarily gynecologists, cardiologists and ophthalmologists is necessary.

Contributors

MM performed examination of anterior segment, direct and indirect ophthalmoscopy, ultrasound examination, OCT examination and made fundus photography. She also took a big part in writting of this manuscript. NC performed examination of anterior segment, direct and indirect ophthalmoscopy and was a major contributor in writting the manuscript. Both autors read and approved the final manuscript.

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Eksudativna bulozna ablacija retine u okviru eklampsije

APSTRAKT

Ablacija retine je rijetka komplikacija hipertenzivnih poremećaja kod trudnica. Javlja kod 1% pacijentica sa teškom formom preeklampsije i kod 10% pacijentica sa eklampsijom. U većini slučajeva dolazi do spontane rezolucije tokom nekoliko nedjelja obično ne ostaju sekvele. Prikazujemo slučaj 39-godišnje prvorotke sa eklampsijom kod koje se razvila serozna bilateralna ablacija retine tri dana prije porođaja. Nakon porođaja carskim rezom i uspostavljanja normalnih vrijednosti arterijskog pritiska dolazi do spontane resorpcije subretinalne tečnosti i vidna oštrina se postepeno vraća na normalne vrijednosti.

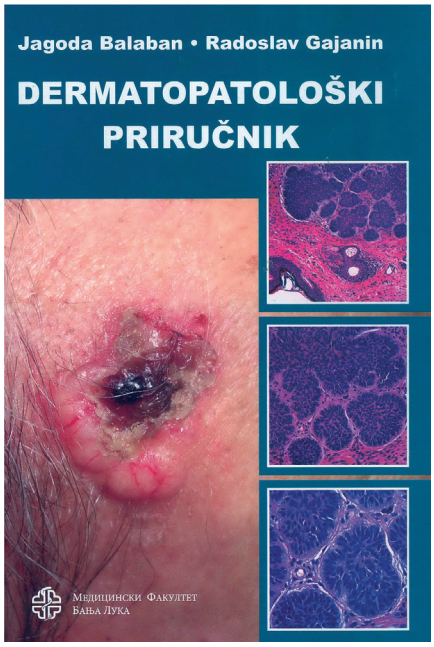
KLJUČNE RIJEČI:

eksudativna ablacija retine, eklampsija, arterijska hipertenzija

BOOK REVIEW

UDK 616.5(049.32)

Dermatopathology Manual



Jagoda Balaban M.D. and Radoslav Gajanin, PhD, are the editors of the book " Dermatopathology manual", which has been approved by the Faculty of Medicine in Banja Luka as an assistant university textbook.

The authors Jagoda Balaban, M.D., and Djuka Ninkovic – Baros, MSc, work on Dermatology and Venereal Diseases Department, Clinical Center Banja Luka; Bogdan Zrnić, M.D., Vesna Gajanin, M.D., and Alma Prtina, MSc., dermatologists at the Faculty of Medicine; Radoslav Gajanin, PhD, Svetlana Pavlovic Tomasevic, M.D., and Bozana Babic, M.D., work at Department of Pathology, Clinical Center Banja Luka.

The book is a result of collaboration between dermatologists and pathologists in which they describe fifty different clinical and morphological entities. Systematically and clearly, the authors express the nature and mechanism of their occurrence, clinical, morphological and histological characteristics.

At the same time, they provide a modern range of therapeutic modalities, and the reason for their choice is based upon the existing data from the scientific literature, as well as their own working experience. All entities are illustrated with original photographs of the clinical and histological aspect of changes.

The manual is primarily intended for the exam preparation of medical, dentistry and nursing students, as well as for everyday work of residents and specialists in dermatology and pathology and mastery in standard and new options in diagnosis and treatment of these infections.

Rheumatologists, specialists of internal medicine and doctors in primary care, which are not fully aware of the possibility of correct diagnosis and treatment of patients with skin diseases can also use the information from this book.

In the reviewers' opinion, "Dermatopathology manual" is a unique manuscript in Serbian language and is, from that respect, of great importance.

Jagoda Balaban M.D.

Instructions for Autors

Scripta Medica (SM) is a peer-reviewed international journal published under the auspices of the Medical Society of the Republic of Srpska. The journal publishes original biomedical studies, including those addressing ethical and social issues. As a general medical journal, SM gives preference to clinically oriented studies over those on experimental animals. It publishes peer-reviewed original research papers, case reports, review articles, essays, special articles, clinical problem-solving, images in clinical medicine only in English. Book reviews and news are published only in Serbian. The full text of SM is available, free of charge, online at www.scriptamedica.com.

General instructions

1. Manuscripts should be submitted in the .DOC format (MicrosoftWord), using the Times New Roman font. The text should be single spaced in 11 point. The main heading should be 12 point **bold**. Subheadings should be 11 point **bold**. Tables must be in 10 point, single spaced; headings within tables should be in 10 point **bold**; the main table heading should be in 12 point **bold**; legends should be single spaced in 11 point. Illustrations can be submitted in either JPG or TIFF format (300 dpi or higher resolution).

2. Drugs and chemicals should be indicated by generic names. Instruments, apparatus or other devices are indicated by trade names, with the producer's name and place of production indicated in brackets.

3. Numbers in text and tables should be provided if expressed as %; means should be accompanied by SDs, and medians by interquartile range (IQR). In text, use following rule: spell out numbers up to ten and then use numerical designation for 10 and above.

4. All images must have minimum resolution of 300 dpi. The main figure heading should be in 10 point **bold**; legends should be single spaced in 10 point.

5. References should be indicated in the text sequentially in the Vancouver numbering style, as superscripted numbers after any punctuation mark.

6. Units of measurement, length, height, weight and volume are to be expressed in metric units (e.g., meter—m, kilogram—kg, liter—l) or subunits. Temperature should be in degrees Celsius (oC); quantities of substances are given in moles (mol), and blood pressure is expressed as millimeters of mercury (mm Hg). All values of hematological, clinical and biochemical measurements use the metric system according to the International System of Units (SI units).

7. Abbreviations may be used for very long names, including those of chemical compounds. The full name should be given when first mentioned in the text unless it is a standard unit of measurement. If abbreviations are to be used in the Abstract, each should be explained when first mentioned in the text. Well-known abbreviations, such as DNA, AIDS, HIV, ADP, ATP etc, dont need to be introduced by the full name. Titles should include abbreviations only when the abbreviation is universally accepted.

8. Authorship statement. To qualify for authorship, one must made substantial intellectual contributions to the study on which the article is based (WAME.com, Policy Statements—Authorship). The author should participate at least in one of these three categories:

a. research question, conception and design, data acquisition and analysis,

b. statistical analysis, interpretation of data, provision of funding, technical or material support, overall supervision of the project.

c. drafting or critical revision of the manuscript.

In some research projects may participate experts (such as biostatisticians or epidemiologists) that may not be equally familiar with all aspects of the work (for example, some clinical variables or laboratory measurements), but they may be qualified as the authors. A statement acknowledging contribution to the manuscript should be signed by all the authors. It will be published in the section "Author Contributions." The corresponding author is responsible for the integrity of the work as a whole. It is dishonest to omit mentioning the investigator who had important engagement with some aspects of the work.

9. Financial disclosure. A disclosure statement declaring any potential conflict of interest must be signed by each author. (See the policy statement on conflict of interest issued by the World Association of Medical Editors, WAME, www.wame.org or ICMJE uniform disclosure form for potential conflicts of interest, www.icmje.org.) This disclosure includes all affiliations or financial involvement (e.g., employment, consulting fee or honorarium, gifts, stock ownership or options, travel/accomodations expenses, grants or patents received or pending, and royalties) with any organization having a financial interest in or financial confl ict with the subject matter or materials discussed in the manuscript. This information will be held in confidence while the paper is under review. If the manuscript is accepted for publication, the editors will discuss with the author how such information is communicated to the reader in the section "Conflicts of interest."

10. Acknowledgment statement. The cover letter must state that the authors obtained written permission from all individuals named in an Acknowledgment or cited as personal communications.

11. Consent statement and permission obtained by the institutional ethics committee (IEC). A cover letter should state that written informed consent was obtained from all subjects (patients and volunteers) included in the study, and that the study was approved by the IEC.

The majority of these instructions are in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (www.icmje.org).

12. Cover letter. The letter accompanying the submission should include the following:

a. A statement that the paper has not been previously published, nor is it concurrently submitted to any other journal,

b. A statement that the manuscript has been read and approved by all authors.

c. Assertion that written acknowledgments, consent statements and/or permission by the institutional ethics committee were obtained. This letter should be signed by corresponding author.

13. Submission of manuscripts. Manuscripts and all enclosures (cover letter, authorship statement and financial disclosures) should be sent by e-mail to editor@scriptamedica.com, preferably in one file. Signed copies of the cover letter and various statements may be faxed to +387 (51) 329-100. Submissions that do not comply with these instructions will be returned, unread.

14. Editorial process. Manuscripts deemed suitable for publication by in-house assessment will be reviewed by two or more outside experts. Contributors are encouraged to provide names of two or more qualified reviewers with experience in the subject of the submitted manuscript, but this is not mandatory. Page proofs of accepted articles will be sent to the corresponding author, and the corrected proofs should be returned within three days. The entire process, from the initial submission of the manuscript to the final review, including the sending and receiving of page proofs, can be completed online.

15. Review procedure. Manuscripts suitable for peer review will be sent to two outside reviewers. Some manuscripts may be accepted without revision, but if revision is required, the corresponding author must address each question, criticism and suggestion from the reviewers and editor. These topics can be addressed in a letter to the editor along with a revised manuscript. The acceptance rate for SM is around 60%.

16. For further information, please contact us at the following address:

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Specific instructions for a manuscript

Title page. The title page of the manuscript contains the title of the article, the full name of each author (without titles), and the departments and institutions of the author(s) in the order they are listed. The title page must also include the name of the corresponding author, (along with address, phone and fax numbers and e-mail address) to which the work should be attributed. A short running title should have no more than 40 characters, including spaces. The word count should be indicated as well. Original articles may have up to 2.500 words, excluding references and abstract.

The title should identify the main topic or the message of the paper. The standard title of a research paper is a phrase (rarely a sentence) that identifies the topic of the paper; it should be concise and precise, informative and descriptive.

The title of a descriptive paper should include the necessary description, function, purpose, animal species or population. When a method is described, the title should indicate whether it is new or improved.

Abstract and key words. Structured abstracts should be included in papers that report original research. Abstracts are limited to 250 words in four labeled paragraphs: Introduction, Materials and Methods, Results, and Conclusion. The abstract should state concisely the question that was asked or the objectives of the study, the methods that were used, the results obtained, and adequately answer the question posed in the introduction. The abstract should provide pertinent information when read alone. Below the abstract, authors should provide 3-6 key words or short phrases, according to terms from the Medical Subject Headings—MeSH (www.nlm.nih.gov/mesh).

Introduction. Generally, this section provides the motivation for the paper (i.e., what is missing or unknown in the research literature at this time), an overview of the scientific theory or conceptual models on which the research was based, and the purpose of the study and why it is important. Cite only relevant references.

Materials and methods. This section accurately describes the procedures used to carry out the study; it should be complete enough to permit others to replicate the study. Describe the methodological design, subjects, data sources, data collection methods, and any statistical and analytical procedures. These five parts may not be needed in all papers. Short papers may include these details in different paragraphs, but titled subsections may be used in longer papers. The Methods section should describe how the research was structured, how subjects or groups of subjects (defined by sex, age, and other characteristics) and how the subjects were chosen and assigned to these groups. Identify all drugs and chemicals by generic names, exact drug dosages and routes of administration. Variability should be expressed in terms of means and standard deviations (SD). Because SD and SEM are positive numbers, we recommend elimination of a +/- sign; instead, the SD may be given in brackets. For example, "systolic blood pressure in group of healthy students was 129 mm Hg [SD = 6, n = 87]." A p-value can be used to disprove the null hypothesis, but the authors should also give an estimate of the power of the study and state the exact tests used for statistical analysis.

Results. This section presents findings in logical sequence using the text, tables and illustrations. This section should show how the results of the study answer the research question. This may be shortest part of the entire paper. Details may be presented concisely in one or more tables or figures. Do not repeat the data presented in tables or illustrations in the text. Emphasize or summarize only important observations and how these answer the question posed in the introduction.

Tables. Each table (4 tables or figures are permitted) with its legends, should be self-explanatory and numbered in Arabic numerals in order of their mentioning in the text. The title should be typed above the table, and any explanatory text, including definitions of abbreviations, is placed below the table.

Illustrations (Figures). All figures (photographs, graphs, or schemes) should be numbered with Arabic numerals in the order of their mentioning in the text (a maximum of 4 figures or tables may be submitted). All lettering should be dark against a white background and of sufficient size to be legible when reduced for publication. Do not send original artwork, x-ray films, or ECG tracings but rather photographs of such material. Images need to be at least 300 DPI (JPG or TIF fi les). Figure legends should be typed double-spaced on a separate page with Arabic numerals corresponding to the figure. All symbols, arrows, numbers, or letters should be explained in the legend. An internal scale should appear on photomicrographs, and methods of staining should be described in the legend.

Discussion. Briefly state the principal finding that relates to the purpose or research question posed in the Introduction and follow the interpretation of the results obtained. Compare your findings with work reported previously by others. Discuss the implications of your findings and their limitations with respect to the methods used.

Acknowledgments. List all persons as well as financial and material supporters who helped to realize the project, even if they did not meet the criteria for authorship.

References. The reference list is the responsibility of the authors. List all the papers or other sources cited in describing previous or related research. Cite references in the text sequentially in the Vancouver numbering style, as superscripted number after any punctuation mark. For example: ...as reported by Vulić and colleagues.12 When two references are cited, they should be separated by comma, with no space. Three or more consequtive references are given as a range with an en rule. References in tables and figures should be in numerical order according to where the item is cited in the text. For citations according to the Vancouver style, see Uniform Requirements for Manuscripts Submitted to Biomedical Journals; this source gives the rules and formats established by the International Committee of Medical Journal Editors (www.icmje.org). If there are six authors or fewer, list all six by last name, space, initials, comma. If there are seven or more, list the first three in the same way, followed by et al. For a book, list the editors and the publisher, the city of publication, and year of publication. For a chapter or section of a book, give the authors and title of the section, and the page numbes. For online material, please cite the URL and the date you accessed the website.. Online journal articles can be cited using the DOI number. Do not put references within the Abstract section. All titles should be in English (the name of the original language should appear in brackets). See examples below that conform to the Uniform Requirements for Manuscripts Submitted to Biomedical Journals:

De Lacey G, Record C, Wade J. How accurate are quotations and references in medical journals. BMJ 1985; 291:884-6.

International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. Croat Med J 2003; 44:770-83.

Huth EJ. How to write and publish papers in the medical sciences. Philadelphia: ISI Press, 1982.

Davidović L, Marković M, Čolić M, et al. Treatment of traumatic rupture of the thoracic aorta. Srp Arh Celok Lek 2008; 136: 498-504.

Curtis MJ, Shattock MJ. The role of the manuscript assessor. In: Hall GM, ed. How to write a paper. London: BMJ Publishing Group; 1994: 89-95.

Electronic publications:

International Society of Scientometrics and Informatics Web site. Available at: http://www.issi-society.info Accessed March 20, 2012.

Lock SP. Journalology: are the quotes needed? CBE Views. 1989:1257-9. Available at: http://garfi eld.libraryupenn.edu/ essays/v13p019y1990.pdf. Accessed April 25, 2012.

Review article

Review articles are written by individuals who have studied a particular subject or area extensively, and who are considered experts. For these reviews, the word count may not exceed 2.500 words, excluding references and abstract. The manuscript may have up to 4 tables or illustrations, and as many as 50 references.

Case report

Case reports are most likely to be published if they describe any of the following: an unreported drug side effects (adverse or benefi cial), drug interactions; a new, unexpected, or unusual manifestation of a disease; previously unsuspected causal association between two diseases; presentations, diagnosis and/ or management of new and emerging diseases; an unexpected association between diseases or symptoms; an unexpected event in the course of observing or treating a patient, fi ndings that shed new light on the possible pathogenesis of a disease or an adverse effect; a previously unknown disease. *Scripta Medica* does not publish instructive case reports, that is, presentations that make important teaching point of what is already well known but often forgotten.

Case reports (no longer than 750 words) should include the following: title, case presentation (including up to three illustrations) and discussion, references (up to six), and an unstructured abstract in English or Serbian. The abstract may be a single paragraph containing no more than 100 words, and followed by key words. Title should facilitate retrieval with electronic searching. Case presentation should include the history, examination and investigations adequately, description of treatments, all available therapeutic options that have been considered and outcomes related to treatments. Discussion includes the following: statement an unusual diagnosis, prognosis, therapy; report of a literature review of other similar cases; explain rationale for reporting the case; what is unusual about the case; could things be done differently in a similar case?

Case reports may have as many as five authors. A very short case, about a particular disease can be submitted as a Letter to the Editor. Consent for publication must be obtained from the patients involved; if this is not possible, permission from a close relative or guardian must be obtained before submission.

In a cover letter authors should indicate how the case report contributes to the medical literature. Submissions that do not include this information will be returned to authors prior to peer review. For all case reports, informed written consent is required; the cover letter should state that consent was obtained. Authorship statement and financial disclosure should be presented.

Images in clinical medicine

The editors will consider original, clear and interesting images that depict new or "classic" clinical pictures submitted along with a descriptive paragraph of up to 200 words. The report may include two authors and three references. The authors must obtain a signed, informed consent from the patient or from a close relative or guardian. The cover letter from the corresponding author should state that written consent was obtained.

Clinical problem-solving

Solutions for various clinical problems, including certain clinical studies, should include the following sections: Abstract, Introduction, Methods or Case(s) Presentation, up to four tables or illustrations, Discussion, References (maximum 20). The unstructured Abstract must be in English and be limited to 150 words, and followed by key words. This type of communication should not exceed 1400 words in all, including references and tables. Authors must obtain signed informed consent directly from the patients involved or from a close relative or guardian before submission. The cover letter should note that consent was obtained. Authorship statement and financial disclosure should be presented.

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If the letter refers to a recent journal article, it should not exceed 250 words, excluding references. All letters should be brief and to the point with no more than five reference citations. Figures or tables are not permitted in this format. Financial disclosure should be presented.

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Editorials are solicited by the editor to provide perspective on articles published in the journal and/or to express the general policies or opinions of the Editorial Board.

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Special articles of 1500 words or less may be devoted to any medical problem, historic perspective, education, demography, or contemporary issues. Up to 15 references may be cited, and the piece may contain 2 tables or illustrations.

An unstructured abstract in English (150 words or less) should accompany a specific article. Finacial disclosure should be presented.

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The authors of a particularly interesting or significant articles may be asked by the editor of the *Scripta Medica*, or directly by the media, to write a press release, a text that will help spread the message to wide audience. Neither authors nor journalists should distribute unpublished reports until the journal's media embargo has expired.

Press release should be between 150 and 250 words long and convey the main message in short sentences and understandable terms. Lay terminology should be used whenever possible, and technical words and abbreviations should be explained when first used. For lay readers and listeners approximations are preferable to percentages when reporting data. For example, 9% becomes "nearly one in ten", and 55% becomes "more than half". The press release should contain the name address, telephone, and e-address of the primary or senior author, but if there are multiple authors, one could be selected to talk to the media. When appropriate, *Scripta Medica* may organize a press conference to present interesting articles. The authors will be invited, and the press releases will be distributed.

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