



In Post-Tonsillitis Bleeding Clinical Effectiveness of Hemostatic Drugs

Boltaev M. F., Nurov U. I., Ikramova F. S.

Bukhara State Medical Institute, Republic of Uzbekistan, Bukhara

Abstract

The work was performed at the ENT department of the Bukhara City Clinical Hospital. The clinical part of the work is based on the results of observation and treatment of 90 patients who had difficulties during hemostasis from the bed of the palatine tonsil during a planned tonsillectomy for chronic tonsillitis. In the studied patients, an analysis of the effectiveness of new domestic hemostatic agents of local action was carried out.

The use of local hemostatic agents hemotex and thrombocol to stop bleeding from the bed of the palatine tonsil after tonsillectomy has been revealed to reduce the time of stopping bleeding (up to 4.3 ± 0.3 minutes, and up to 3.4 ± 0.2 minutes, respectively, in the control group - 15.9 ± 1.6 minutes), to avoid massive blood loss (the volume of blood loss in patients of the control group - 128.4 ± 16.7 ml, with the use of hemotex - 74.1 ± 7.9 ml, with the use of platelet - 59.5 ± 6.2 ml), recurrence of bleeding and improve the results of treatment of patients.

Keywords: chronic tonsillitis, tonsillectomy, hemostasis, thrombosis, hemotex.

Relevance: The problem of bleeding in emergency and planned otorhinolaryngology has not lost its relevance for many years. Patients with nosebleeds admitted to the ENT hospital account for an average of up to 20.5% of all hospitalized patients per year (1;3). Also, bleeding is one of the most frequent complications after tonsillectomy, is often accompanied by significant blood loss, requires urgent measures, lengthens the length of stay of patients in the hospital, causes significant economic damage (4;7).

The means of local hemostasis available in the arsenal of otorhinolaryngologists, such as diathermy, mechanical compression of blood vessels, cryotherapy are not always effective, as evidenced by numerous publications (2;5). Often, bleeding that does not respond to local effects forces ENT surgeons to resort to radical measures - surgical ligation or X-ray endovascular occlusion of the main vessels, which is always associated with the risk of serious complications (6). Transfusion of blood components is becoming an increasingly dangerous procedure due to the constant increase in the number of life-threatening infectious diseases with a parenteral mechanism of infection, such as HIV, viral hepatitis and others.

Considering the above, it becomes obvious the need to search for new effective, reliable and safe hemostatic agents of local action (3). Numerous studies indicate the high effectiveness of combined local hemostatic agents based on collagen, cellulose, metal compounds, as well as plasma coagulation factors used in surgery, urology, traumatology, dentistry and other branches of medicine (2,4). In this regard, it is advisable to study the effectiveness of local hemostatic agents for bleeding in otorhinolaryngology. In the literature available to us, we have not found information about the use of the local hemostatic agents studied by us in patients with nosebleeds and bleeding after tonsillectomy.



Purpose of the study: To determine the effectiveness of the use of new domestic hemostatic agents in patients with bleeding from the bed of the palatine tonsil after tonsillectomy.

Materials and methods. The work was performed at the ENT department of the Bukhara City Clinical Hospital. The clinical part of the work is based on the results of observation and treatment of 90 patients who had difficulties during hemostasis from the bed of the palatine tonsil during a planned tonsillectomy for chronic tonsillitis. In the studied patients, an analysis of the effectiveness of new domestic hemostatic agents of local action was carried out.

During the study, the time of stopping bleeding, the degree of reliability of hemostasis, the volume of blood loss, the effect of local hemostatics on the coagulological properties of blood was determined by determining the activated partial thromboplastin time, the level of fibrinogen and prothrombin index before and after the application of hemostatic agents, a laboratory assessment of red blood indicators in dynamics, as well as an assessment of the degree of hemodynamic disorders.

Research results and their discussion. The results obtained (Tables 1 and 2) indicated a significant difference in achieving the timing of adequate hemostasis and in the amount of blood loss in the studied groups of patients.

Table 1. The effect of hemotex on the time of stopping bleeding and the volume of blood loss in patients with chronic tonsillitis

Groups of patients		Bleeding stop time (min)	Volume of intraoperative blood loss (ml)
Control group	Chronic tonsillitis is a simple form	14,8±1,2	90,1±10,6
	Chronic tonsillitis toxic-allergic form I	15,7±1,9	127,6±12,2
	Chronic tonsillitis toxic-allergic form II	17,2±1,5	128,4±16,7
Group with the use of hemotex	Chronic tonsillitis is a simple form	3,8±0,2*	65,8±6,2*
	Chronic tonsillitis toxic-allergic form I	4,1±0,6*	69,2±7,1 *
	Chronic tonsillitis toxic-allergic form II	5,0±0,9*	74,1±7,9*

*the differences were statistically significant in relation to the control group (p <0.05)

Table 2. The effect of the thrombokol plate on the time of stopping bleeding and the volume of blood loss in patients with chronic tonsillitis

Groups of patients		Bleeding stop time (min)	Volume of intraoperative blood loss (ml)
Control group	Chronic tonsillitis is a simple form	14,8±1,2	90,1±10,6
	Chronic tonsillitis toxic-allergic form I	15,7±1,9	127,6±12,2



	Chronic tonsillitis toxic-allergic form II	17,2±1,5	128,4±16,7
A group with the use of a thrombokol	Chronic tonsillitis is a simple form	2,9±0,1 *	53,6±5,8*
	Chronic tonsillitis toxic-allergic form I	3,2±0,3*	55,9±5,4*
	Chronic tonsillitis toxic-allergic form II	4,1 ±0,4*	59,5±6,2*

*the differences were statistically significant in relation to the control group (p <0.05)

The average time to stop bleeding in the control group in patients with chronic tonsillitis of a simple form was 14.8± 1.2 minutes, with tamponade with a hemotex napkin - 3.8± 0.2 minutes, with the use of a thrombokol plate - 2.9± 0.1 minutes (p<0.05). The average volume of intraoperative blood loss in the control group of patients with chronic tonsillitis of a simple form was 90.1 ± 10.6 ml, in the group with the use of hemostatic tissue hemotex, the volume of blood loss was 65.8± 6.2 ml, in the group with the use of a platelet thrombokol - 53.6± 5.8 ml. The average time to stop bleeding in the control group in patients with chronic tonsillitis of the toxicoallergic form of the 1st degree was 15.7 ± 1.9 minutes, with tamponade with a hemotex napkin 4.1 ± 0.6 minutes, with the use of a thrombokol plate - 3.2± 0.3 minutes (p <0.05). The average volume of intraoperative blood loss in the control group with chronic tonsillitis of the toxicoallergic form of the 1st degree was 127.6±12.2 ml, in the group with the use of a hemostatic napkin, the volume of blood loss was 69.2± 7.1 ml, in the group with the use of a platelet - 55.9± 5.4 ml. The average time to stop bleeding in the control group in patients with chronic tonsillitis of the toxicoallergic form of the 2nd degree was 17.2± 1.5 minutes, with tamponade with a hemotex napkin 5.0± 0.9 minutes, with the use of a thrombokol plate - 4.1± 0.4 minutes (the differences are statistically significant relative to the control group, p< 0.05). The average volume of intraoperative blood loss in the control group of patients with chronic tonsillitis of the toxicoallergic form of the 2nd degree was 128.4 ±16.7 ml, in the group with the use of a hemostatic napkin; the volume of blood loss was 74.1 ± 7.9 ml, in the group with the use of a platelet - 59.5± 6.2 ml.

Table 3. Comparative evaluation of the effect of hemotex and thrombokol on the time of stopping bleeding and the volume of blood loss in patients with chronic tonsillitis

Groups of patients	Bleeding stop time (min)		Volume of intraoperative blood loss (ml)	
	гемотекс	тромбокол	гемотекс	тромбокол
Chronic tonsillitis is a simple form	3,8±0,2	2,9±0,1	65,8±6,2	53,6±5,8
Chronic tonsillitis toxic-allergic form I	4,1±0,6	3,2±0,3	69,2±7,1	55,9±5,4
Chronic tonsillitis toxic-allergic form II	5,0±0,9	4,1 ±0,4	74,1±7,9	59,5±6,2

*the differences were statistically significant in relation to the control group (p <0.05)

Thus, the average time of surgical intervention in a group of patients using a hemotex napkin was 31.2±4.4 minutes. In patients with the use of the thrombokol plate, the average time of surgical intervention was 26.4± 2.3 minutes. In the group of patients with the use of a gauze swab, tonsillectomy took 47.1±4.9 minutes. The average time spent on stopping bleeding in the control



group was 15.9 ± 1.6 minutes, in the group with the use of a hemotex napkin - 4.3 ± 0.3 minutes, in the group with the use of a platelet - 3.4 ± 0.2 minutes.

Conclusions. The use of local hemostatic agents hemotex and thrombocol to stop bleeding from the bed of the palatine tonsil after tonsillectomy reduces the time of stopping bleeding (up to 4.3 ± 0.3 minutes, and up to 3.4 ± 0.2 minutes, respectively, in the control group - 15.9 ± 1.6 minutes), to avoid massive blood loss (the volume of blood loss in patients of the control group - 128.4 ± 16.7 ml, with the use of hemotex - 74.1 ± 7.9 ml, with the use of platelet - 59.5 ± 6.2 ml), recurrence of bleeding and improve the results of treatment of patients.

References

1. Aksoy F, Ozturan O, Veyseller B, Yildirim YS, Demirhan H. Comparison of radiofrequency and monopolar electrocautery tonsillectomy // J Laryngol Otol. 2010 Feb; 124(2): 180-4. Epub 2009 Nov 30
2. Belozerskaya G.G., Makarov V.A., Malixina L.S. i soavt. Novie gemostaticheskie sredstva gemoteks i trombokol // Sbornik tezisov 2 - go s'ezda Rossiyskogo nauchnogo Obshhestva farmakologov, - Moskva, - 2003 g., - S.65
3. Vishnyakov V.V., Xusainova N.E. Tonzillektomiya pri pomoshi xolodnoplazmennogo xirurgicheskogo apparata "KOBULATOR" //Materiali V Vseros. konf. otorinolaringologov. M, - 2006, - s. 315-316
4. Cohen D, Dor M. Morbidity and mortality of post-tonsillectomy bleeding: analysis of cases // J Laryngol Otol. 2008 Jan;122(1):88-92. Epub 2007 Mar 12.
5. Czarnetzki C. et al. Dexamethasone and Risk of Nausea and Vomiting and Postoperative Bleeding After Tonsillectomy in Children. JAMA. 2008;300(22):2621-2630
6. Cohen D, Dor M. Morbidity and mortality of post-tonsillectomy bleeding: analysis of cases // J Laryngol Otol. 2008 Jan;122(1):88-92. Epub 2007 Mar 12.
7. Czarnetzki C. et al. Dexamethasone and Risk of Nausea and Vomiting and Postoperative Bleeding After Tonsillectomy in Children. JAMA. 2008;300(22):2621-2630