Usefulness of bleeding Profile in Adenotonsillectomy
Ali abd-almer jwad,College of medicine al-qadisiyah university

Abstract:

Introduction: Infectious and inflammatory diseases involving the pharynx, tonsils, and adenoids account for a significant proportion of childhood illnesses and pediatric health care expenditures. Preoperative assessment in patients undergoing adenotonsillectomy is crucial and may reveal problems that could complicate either surgery or the patient’s postoperative course. It is crucial to detect the existence of any coagulation abnormalities, routine evaluation of coagulation parameters before surgery in patients undergoing adenotonsillectomy is controversial.

Aim of study: assesses the need for coagulation profile prior to adenotonsillectomy

Method: This study is prospective, consisted of 321 children complaining of adenotonsillar problem. Age, sex, history, physical examination, hemoglobin (Hb %) and bleeding profile in form of prothrombin time, partial thromboplastin time, international normalized ratio was done for all patients. Patients with risk factor for bleeding, abnormal bleeding profile and further work reveals clotting abnormality were excluded from study.

Results: Two patients of normal investigation developed secondary hemorrhage, which is due to infection and treated conservatively. Two of prolonged bleeding profile developed primary bleeding readmitted to theater one of them from adenoid remnant, and one from slip ligature.

Discussion: Bleeding problems in surgical patients are not uncommon and may occur for a variety of reasons if a bleeding disorder is suspected, a careful clinical history and examination make important contributions in reaching a diagnosis in our
study we find no significant intraoperative or postoperative bleeding occurs due to prolong bleeding profile so relevance of bleeding profile before adenotonsilectomy is questionable.

**Conclusion:** The routine preoperative bleeding profile is not recommended in every patient undergo adenotonsillectomy operation unless past medical, family history or physical examination suggest bleeding disorders.

**Introduction:** Infectious and inflammatory diseases involving the pharynx, tonsils, and adenoids account for a significant proportion of childhood illnesses and pediatric health care expenditures. They often result in two of the most common surgical procedures of childhood, tonsillectomy and adenoidectomy. Preoperative assessment in patients undergoing adenotonsillectomy is crucial and may reveal problems that could complicate either surgery or the patient’s postoperative course. It is crucial to detect the existence of any coagulation abnormalities. A family history of coagulation disorders or easy bruising may be a warning sign of an underlying bleeding disorder that warrants further hematological evaluation. Routine evaluation of coagulation parameters before surgery in patients undergoing adenotonsillectomy is controversial.

The prothrombin time measures the integrity of the extrinsic and common coagulation factors (VII, X, and V; prothrombin; and fibrinogen) the partial thromboplastin time measures the examination, hemoglobin (Hb %) and integrity of the intrinsic and common bleeding profile in form of prothrombin pathways of coagulation (high-molecular- weight kininogen; prekallikrein; factors international normalized ratio was done for XII, XI, IX, VIII, X, and V; prothrombin; all patients. Patients with prolonged and fibrinogen). The sensitivity of the bleeding profile who had risk factor for prothrombin time and partial bleeding, and further work revealed thromboplastin time in detecting coagulation factor deficiencies may vary with the reagents used to perform these tests, and each laboratory must determine its own reference standards. Routine screening of all preoperative patients with a platelet count, bleeding time, prothrombin time, and partial thromboplastin time not only is uninformative but also may be counterproductive if follow-up testing causes unnecessary expense and delays in surgery.

**Aim of study:** assesses the need for coagulation profile prior to adenotonsillectomy.

**Method:** This study is prospective, consisted of 321 children complaining of adenotonsillar problem. They had been admitted to the E.N.T. department of Al-Diwaniyah Teaching Hospital for elective tonsillectomy and or adenoidectomy between January 2013 and December 2015. All operations were done by cold steel dissection method by same surgeon. Patients with prolonged bleeding profile who had risk factor for bleeding, and further work revealed thromboplastin time in detecting
clotting abnormality were excluded from study. Between 4-10 years old. 4.3% (14) had risk factor for bleeding tendency but their bleeding profile was normal. 16 patients were male with female to male ratio 3:1 as undergo adenoidectomy only (4.9%) of all patients. Age ranged from 3-16 years patients.

Results:

Of 321 patients 214 were females and 107 were males with female to male ratio 3:1. Age ranged from 3–16 years with mean age 8 years. Most patients were between 4–10 years old. 4.3% (14) had risk factor for bleeding tendency but their bleeding profile was normal. 16 patients were male with female to male ratio 3:1 as undergo adenoidectomy only (4.9%) of all patients. Age ranged from 3-16 years patients.

Figure 1 male female ratio

Table 1 age distribution in adenotonsiilectomy

<table>
<thead>
<tr>
<th>Age years</th>
<th>NO</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 – 6</td>
<td>170</td>
<td>53%</td>
</tr>
<tr>
<td>7 – 10</td>
<td>89</td>
<td>27.7%</td>
</tr>
<tr>
<td>11 – 16</td>
<td>62</td>
<td>19.3%</td>
</tr>
</tbody>
</table>

Table 2 bleeding profile results

<table>
<thead>
<tr>
<th>patients</th>
<th>PT</th>
<th>PTT</th>
<th>INR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORMAL</td>
<td>303(94.4%)</td>
<td>306(95.4%)</td>
<td>314(97.9%)</td>
</tr>
<tr>
<td>PROLONG</td>
<td>18(5.6%)</td>
<td>15(4.6%)</td>
<td>7(2.1%)</td>
</tr>
</tbody>
</table>

Two patients of normal investigation developed secondary hemorrhage, which was due to infection and treated conservatively. Two of prolonged bleeding profile patients developed primary bleeding readmitted to theater one of them from adenoid remnant, and one from slipped ligature.

Discussion:

Bleeding problems in surgical patients are not uncommon and may occur for a variety of reasons if a bleeding disorder is suspected, a careful clinical history and examination make important contributions in reaching a diagnosis. Coagulation studies (prothrombin time [PT]/partial thromboplastin time [PTT])/international normalized ratio and platelet quantification are routinely obtained in patients with cardiovascular risk factors because significant bleeding can lead to major perioperative cardiovascular complications, although, we noticed that preoperative coagulation profile obtained in every patients undergo adenotonsiilectomy. In our study we found no significant intraoperative or postoperative bleeding occurred due to
prolong bleeding profile so relevance of bleeding profile before adenotonsillectomy is questionable. Toker asaf et al5 found that pre-operative coagulation screening tests provide low sensitivity and low bleeding predictive value which agree with our results and the study of Eberl W etal6 which demonstrated the lacking effect of laboratory tests to predict postoperative bleeding complications. Galila Zaher7 in his study say that to predict the outcome of hemorrhage, a detailed preoperative history is still the most sensitive tool. Smith and colleagues8, Kang et al9, Burk et al10 and Handler et al11 recommend routine use of bleeding profile prior to operation because the dangerous outcome of post tonsillectomy bleeding even the low incidence. Medical history and examination is more valuable in prediction of bleeding problems as stated by Licameli GR12. The2008 British guidelines for the assessment of the risk of hemorrhage before surgery or invasive procedures state that routine coagulation testing to predict the risk of postoperative hemorrhage in unselected patients before surgery or other invasive procedures is not recommended13

**Conclusion:**
The routine preoperative bleeding profile is not recommended in every patient undergoes adenotonsillectomy operation unless past surgical medical, family, drug history or physical examination suggest bleeding disorders. However. Further studies are needed to develop an approach for such problems.

**References:**
2. Schafer A I, approach to patients with bleeding and thrombosis Cecile medicine chapter24 edition 174 page1124
11. Handler SD, Miller L, Richmond KH, Baranak CC. Post-tonsillectomy
