

## **Effect of Tranexamic acid on conservative treatment of epidural hematoma in traumatic patients**

**Mohammadzadeh A, MD, Samadi Motlag P, MD. Shimia M,MD. Shakeri M,MD**

**Neurosurgery department, Imam Reza hospital, Faculty of Medicine, Tabriz University of Medical Sciences**

**Introduction:** Traumatic brain injury responsible for killing and hospitalization about 10 million people throughout the entire world. Most of these patients are young and active people who make a lot of disability. Tranexamic acid Drug (TXA) is commonly used to reduce blood loss and need for blood transfusions in surgical cases. Aim of this study is investigate the effect of tranexamic acid drug in patients with epidural hematoma.

**Methods:** In a clinical trial of 100 patients with acute epidural hematoma diagnosed with traumatic brain injury were enrolled. The patients in both groups were matched for age and sex groups. 50 patients treated with the tranexamic acid drug were compared with 50 patients in the control group. Size of bleeding diameter and bleeding volume between the two groups were studied.

**Results:** 100 patients with traumatic brain injury with a mean age of  $34.2 \pm 7.9$  were studied. There were 69% male and 31% female. Place of hematoma was 33% in parietal , 39% in the frontal and temporal region was 28%. Bleeding diameter after treatment with tranexamic acid was  $3.71 \pm 1.8$  mm in the control group  $4.03 \pm 1.6$  mm, there was no statistically significant difference between the two groups. The volume of bleeding in patients treated with tranexamic acid was  $8.04 \pm 3.2$  cc in the control group was  $10.4 \pm 3.7$  cc. There was statistically significant difference existed between the two groups.

**Conclusion:** According to the our study tranexamic acid drug has effectively bleeding control in patients with acute epidural hematoma. The role of these drugs in elective surgeries has been proven and in cases of brain trauma could be useful and improving the prognosis of patients.

**Key words:** Tranexamic acid, Acute Epidural Hematoma, Brain Trauma, Cerebral Hemorrhage