

## Relationship between blood group and epistaxis among Nepalese

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### ABSTRACT

The relationship between blood group and epistaxis among the patients coming to Tribhuvan University Teaching Hospital, Kathmandu with idiopathic epistaxis was studied. A total of 235 patients coming to the Emergency Department or Department of Otorhinolaryngology with active nose bleeding in were included. ABO blood group was performed. Nearly half (45.5%) of the patients belonged to O-group followed by A-group others. O-group people were also had longer bleeding time compared to other blood groups.

**Keywords:** O group, epistaxis.

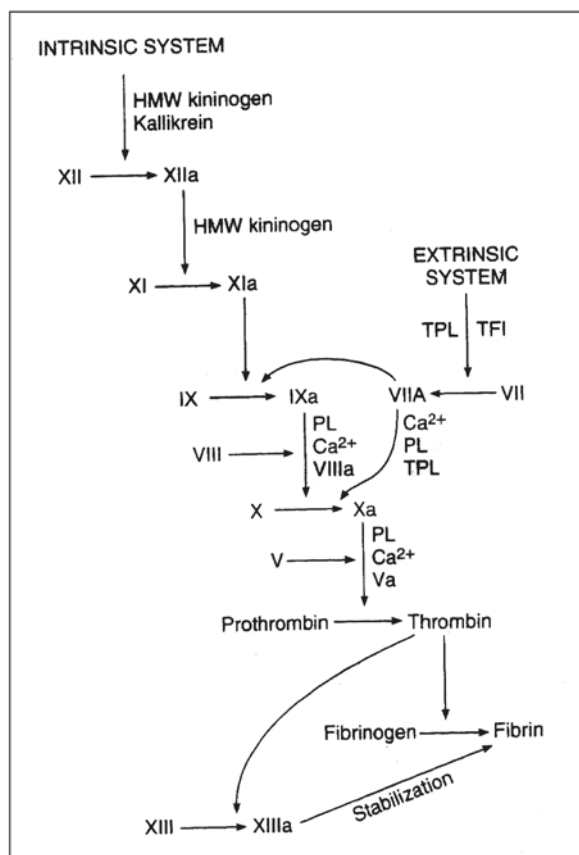
Epistaxis is one of the commonest otorhinolaryngologic emergencies.<sup>1-4</sup> Idiopathic epistaxis is defined as any episode of bleeding from nasal cavity without any detectable cause.<sup>5</sup> Epistaxis is usually of sudden onset. The bleeding may occur from one or many bleeding points particularly Little's area or posteriorly.<sup>6</sup> In the present study the blood group distribution was determined among the victims of epistaxis who presented with active nose bleeding in Dept. of emergency or Dept. of Otorhinolaryngology in Tribhuvan University Teaching Hospital to find out whether there is any relation between the blood group and epistaxis.

A total of 235 patients coming to the Emergency Department or Department of Otorhinolaryngology of Tribhuvan University Teaching Hospital, Kathmandu with active nose bleeding in were included in this study. ABO blood group was performed using monoclonal grouping sera manufactured by Tulip Diagnostics (India). Nearly half (45.5%) of the patients belonged to O-group followed by A-group others. O-group people were also had longer bleeding time compared to other blood groups.

Of the total 235 patients included, nearly half (45.5%) of the patients belonged to O-group followed by A-group (27.6%), B-group (17.9%) and AB-group (8.9%). O-group people were also had longer bleeding time compared to other blood groups.

Epistaxis, either a symptom or a sign,<sup>7</sup> is a common condition and number one emergency. Up to 60.0% of people experience at least one episode of epistaxis in their life time and 6.0% of them demand medical attention.<sup>8</sup> As recorded, in a tertiary hospital of Kathmandu, Nepal 6.0% patients require medical service for epistaxis per annum.<sup>9</sup> In this study, nearly half of the epistaxis patients

belonged to O-group. This was in agreement with the findings of Reddy *et al.*<sup>2</sup> In their study, the O-group Caucasian patients with epistaxis was significantly higher (50.4%) compared to control population (45.1%). In this study also, the difference was highly significant; 45.5% O-group epistaxis patients versus 31.4% O-group general Nepalese population.<sup>10-12</sup> We did not investigate



**Fig. 1.** The clotting mechanism. a- active form of clotting factor; TOL- tissue thromboplastin; TFI- tissue factor pathway inhibitor; PL- phospholipids from aggregated platelets.

the factors associated for such differences. O-group is reportedly associated with a lower expression of von Willebrand factor (also known as factor IX) compared with non-O-groups.<sup>13</sup> von Willebrand factor plays important role in clotting mechanism. A longer bleeding time was demonstrated in patients with group O-group compared with non-O-groups.<sup>14</sup> The higher risk of deep vein thrombosis in individuals belonging to non-O-groups having a higher von Willebrand factor concentration compared with individuals of blood group O was also been documented.<sup>15</sup> All these suggest that blood O-group confers a relative bleeding tendency.<sup>16</sup> This might be the cause of over representation of O-group among the patients admitted with epistaxis in the present study group. Results of this study together with previous studies; therefore, indicate that O-group people (most predominant among Nepalese population<sup>10-12</sup> are relatively more prone to suffer from epistaxis.

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