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# Epistaxis management: evaluation of old tricks and new treatment options

Although epistaxis is a very common and usually mild problem that is experienced by the majority of the population somewhere in life, it can be a very serious and life threatening event. Fighting with a patient with epistaxis usually in the middle of the night with not enough help around is an experience that most of us came across and usually it does not bring sweet memories. We tend to think that certain weather conditions increases the change of a busy duty with lots of patients with epistaxis but this has been shown to be hardly the case [1]. Otorhinolaryngologists with a special interest in hereditary telangiectasia also recognize the significant reduction of quality of life the disease is giving to the patients (and of course to a lesser extent to the doctor) [2,3]. For that reason we are all always interested in "the best" way to manage epistaxis. When studying the literature and talking to colleagues we hear very different approaches in different countries: in the UK senior registrars know how to perform a clipping or cauterization of the sphenopalatine artery and choose early for that option. In the Netherlands we still often use fat gauze packing, some countries love embolization. For anteriorly located bleeding we may use electric or chemical cautery; a pack is very rarely needed. For posterior epistaxis, a thorough nasal endoscopy is performed whenever possible to localize and cauterize a bleeding source. If it is not possible to locate and treat the bleeder the nose is packed with a Merocel or by inflatable carboxymethylcellulose RapidRhino® packing. Both types of packs are equally efficient but RapidRhino® produced significantly lower scores for subjective patient discomfort during insertion and removal of pack [4]. Although widely used, there are no clear guidelines regarding the volume of air to be inflated in the RapidRhino® packs. In this issue of the Journal, Mackeith and colleagues advocate to use a simple manometer-measured, pressure guided nasal pack inflation technique [5]. Important when using tamponade is the technique of the packing. Using slings of gauze and working from the upper part of the nose, moving the sling upwards over the full length of the nose before introduction the next one, leaving the lower meatus and the vestibule open until the last moment has been taught to residents for decades but seems to be more difficult than anticipated. This issue of the journal contains a very interesting paper from Soyka and colleagues describing their experience with their hospital protocol to treat epistaxis [6]. Their conclusion: successful treatment of epistaxis in posterior bleedings could be achieved in 62% by packing and in 97% by surgery points to more liberal use of the OR to treat posterior epistaxis. When performing clipping of the sphenopalatine artery, clinicians should expect to find more than one vessel exiting the sphenopalatine foramen and actively search for these during surgery [7,8]. The arterial configuration of the maxillary artery in the pterygopalatine fossa can be complex but often characteristic loops can be found [7]. Also contrary to what is often believed, epistaxis does not seem to result from underlying arterial hypertension [9]. Anticoagulant treatment does increase the change of having epistaxis and when often recurring in these patients, bivalve septal teflon splints sutured on both sides of the nasal septum and held in place during one month has been suggested to be an effective treatment in patients with recurrent epistaxis [10]. The group most in need of adequate treatment of epistaxis is of course the patients with hereditary telangiectasia. A wide variety of treatments can be used including various forms of cautery, septodermoplasty, topical and systemic hormones treatment [11], N-acetylcysteine [12], antifibrinolytic therapy [13,14], arterial ligation, percutaneous embolization [15], laser therapy, and finally closure of the nostrils [16]. There are some enthusiastic reports of the efficacy of thalidomide (Softenon) in hereditary telangiectasia [17]. However, recently it was mentioned that this treatment is not without potential very serious side effects [18]. Finally, recent reports have demonstrated marked improvement of epistaxis with administration of either intravenous or topical bevacizumab (anti-VEGF) treatment [19-21]. The topical treatment has been shown to be effective and safe [20]. These new treatments bring new hopes to patients with hereditary telangiectasia to give them effective management opportunities without having to choose for closure of their nostrils as the final option to bring their epistaxis to a stop.

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