Introduction
Subperiosteal haemorrhage (SH) regardless of aetiology is a rare condition and rarely described in the literature. SH may result from blunt trauma but spontaneous, non-traumatic subperiosteal haemorrhage (SNTH) has also been reported. SNTH may be caused by elevated venous pressure during i.e. valsalva manoeuvre, vomiting or diving.1,2

SH is more frequent in adolescents than in adults. In early life, the periosteum is not tightly fixated except to the cranial sutures, thus creating a virtual space.1 SNTH is observed in all age groups.3 Location of the haemorrhage is mostly superior or medial in the orbit.1

Treatment of SH or SNTH can be either surgical or conservative. Until now, most reported cases have been treated by ophthalmologists using external access such as an anterior orbiotomy or needle aspiration.4,5 Only a single case using endoscopic surgery has to our knowledge previously been presented.6

Case Report
A 15-year-old boy of Iraqi origin was referred to the emergency room due to head trauma one year earlier due to anaemia.

Proptosis

The patient was referred to the ophthalmology department. Visual acuity was 0.8 on both eyes without correction. Intra ocular pressure was 16 mmHg in the right eye and 21 mmHg in the left eye. Proptosis measurement was 19 mm on the right side vs. 24 mm on the left side. On examination, the left eye was displaced laterally downwards and the motility was impaired in all directions, especially downwards.

Normal visual field was found am. Donder, Stitlaimam.Hand revealed normal conjunctiva, cornea, iris, pupil and lens. Indirect ophthalmoscopy showed normal optic nerves discs, retinae and retinal vessels. The CT scan was reviewed by a neuro-radiologist and though haemorrhage initially was suspected, tumour could not be disregarded. The patient was then examined in the ear-nose and throat (ENT) department. Rhino-pharyngoscopy was performed without revealing any patholgy in nasal cavity.

In general anaesthesia, computer assisted FESS with uncincotomy followed by an anterior/posterior ethmoidectomy was performed. A small incision in the periorbita revealed normal periorbital fat. During this procedure, dark blood between bone and periost was evacuated, consistent with SH. No tumour was found.

Seven weeks after surgery, no subjective symptoms from the eye or nasal cavity were present. Clinical findings revealed no proptosis and no intra-nasal pathology.

Discussion

Even though SH is a rare condition, it remains an important differential diagnosis in patients presenting with sudden proptosis. FESS is a well-proven technique for approaching the periorbital space. So far, only a single case report applying FESS for evacuation of SH has been described.3 Deutsch et. al. concluded that FESS is a safe and effective surgical procedure to achieve drainage of subperiosteal abscess in the orbit in children. This approach shortened the operative and recovery period in contrast to the other surgical techniques.2 Ketenci et al. also found less morbidity and argues that FESS is cosmetically superior to external techniques.2

FESS can be utilized for accessing a SH with a superior-medial location in the orbit, the predominant localisation. More lateral SH may require external access. Ketenci et al. argues that management of SPA should be discussed between ophthalmologists, otolaryngologists and perhaps neurosurgeons.3

References