

09 Medical Paper Before and after, 57134.docx

This is a medical paper that I helped a student 'tune up'. It took about a week and 10 hours to finish to a high quality.

0	1 Original	2 Changes only
01	<p>Abstract</p> <p>Paraffin has been used as a liquid prosthesis for medical purposes, and is still the base material in some ointments. However, it sometimes causes paraffinoma, which is a foreign body reaction to lipid material used on nasal packing at the conclusion of paranasal sinus surgery. Rare cases have been sporadically reported.</p>	<p>Abstract</p> <p>Paraffin has long been used as a base in ointments occasionally causing paraffinoma, which is a foreign body reaction to lipid material in nasal packing used at the conclusion of paranasal sinus surgery. Reported cases are rare.</p>
02	<p>Four patients had a history of sinus surgery with nasal packing and postoperative hemorrhage developed nontender, firm tumors of the priorbit.</p>	<p>We describe four patients, each with a history of sinus surgery in which the sinus cavities had been packed with paraffine-based, gauze strips, who developed postoperative hemorrhaging and nontender, firm priorbit tumors.</p>
03	<p>None of our patients showed a tendency for spontaneous tumor regression or had no beneficial effect of conservative therapy and systemic application of steroids.</p>	<p>No patient showed any spontaneous tumor regression tendencies or any beneficial effect from conservative therapy including the systemic application of steroids.</p>
04	<p>And surgical excision was difficult due to diffuse cellular infiltration and intracutaneous deposits. Histology showed a marked lipogranulomatous reaction to dispersed lipid material with fibrosis.</p>	<p>Diffuse cellular infiltration and intracutaneous deposits of the tumor made surgical excision difficult. Histology showed a marked lipogranulomatous reaction to dispersed lipid material.</p>
05	<p>Keywords: Paraffinoma; Eyelid swelling; Endoscopic endonasal sinus surgery</p>	
06	<p>1. Introduction</p> <p>Paraffin, which was discovered in 1830, is a mineral oil that consists of straight-chain saturated hydrocarbons. Paraffin was believed to induce minimal biological reactions, and therefore was used as a tissue filler in plastic surgery, mainly for the face, chest, and limbs, at the end of the 19th century. However, it was discovered that injecting paraffin as a liquid prosthesis causes paraffinoma as a foreignbody granuloma, and thus it has not been used for this purpose since, although currently it remains widely used as a substrate in ointments. In Japan, there are some reports about paraffinoma from departments of surgery, plastic surgery, and ophthalmology, but to the best of our knowledge none from otorhinolaryngological practice. Here, we present 4 patients in our hospital during the</p>	<p>Discovered in 1830, paraffin is a mineral oil consisting of saturated, straight-chain hydrocarbons. At first, it was believed to induce only minimal biological reactions, and was used as a tissue filler in plastic surgery, mainly for the face, chest, and limbs, by the end of the 19th century. It was subsequently discovered that using paraffin as a liquid prosthesis caused paraffinoma--a foreign body granuloma--and its use ceased. It is now widely used as an ointment substrate that is often incorporated into nasal packing to reduce bleeding and decrease the risk of post-surgery synechia. Paraffinoma subsequent to otorhinolaryngological surgery is rarely reported. Here, we present cases of eyelid paraffinoma developing post-endoscopic endonasal</p>

	<p>past 4year developed paraffinoma with a history of sinus surgery with nasal packing and postoperative hemorrhage which showed some tendency for resorption. During a period of a few weeks to several months, the swelling became a firm, nontender sub-and intracutaneous mass. There was no definite improvement with any conservative therapy or with time. And surgical excision was difficult due to diffuse cellular infiltration and intracutaneous deposits.</p>	<p>sinus surgery (ESS) to treat chronic sinusitis.</p>
07	omitted	omitted
16	<p>Discussion</p> <p>Endoscopic sinus surgery (ESS) is frequently carried out for the treatment of medically resistant chronic rhinosinusitis and nasal polyps. Advances in fibre-optic technology, endoscopic technique and instrumentation have expanded the applications of endoscopic surgery, from a variety of infectious, inflammatory and neoplastic diseases of the paranasal sinuses, to include disorders of the orbit and cranium. The development and use of powered cutting instruments have allowed the sinus surgeon to perform more efficient and less traumatic ESS.</p> <p>However, these relatively new instruments have also led to some complications that have only recently been described. The ophthalmic complications of FESS have been known for many years. The intimate anatomical relationship between the paranasal sinuses and the orbit places the various ocular structures at risk of injury during FESS. In addition, traction on the orbital portion of the anterior ethmoidal artery can be associated with bleeding. Severe complications, like blindness and synechiae formation, can result from an orbital hemorrhage. However, they are benefits of nasal packing. Nasal packing is often impregnated with an ointment, which is consisting of paraffin oil and Vaseline. Paraffin is a mixture of purified, saturated hydrocarbons (n-alkanes) extracted from crude oil and of differing viscosities. Vaseline is a similar substance. Nasal packing allows for a less traumatic placement into and removal from the nasal cavity, as well as providing some antibiotic coverage for nasal bacterial flora. But orbital complications secondary to the petroleum-based packing have been reported. When sinus surgery is performed in</p>	<p>Medically resistant chronic rhinosinusitis and nasal polyps are frequently treated with endoscopic sinus surgery (ESS). ESS complications have been know for many years. The close anatomical relationship between the paranasal sinuses and the orbit places various ocular structures at risk for injury during ESS. Traction on the orbital portion of the anterior ethmoidal artery is associated with bleeding. Severe complications, like blindness and synechiae formation, can result from an orbital hemorrhage. Nasal packing is applied to control bleeding. Nasal packing often contains an ointment consisting of paraffin oil and Vaseline. Paraffin is a mixture of purified, saturated hydrocarbons (n-alkanes) extracted from crude oil. Nasal packing allows for less trauma when placed into the nasal cavity. It also provides some antibiotic coverage for nasal bacterial flora. Orbital complications secondary to paraffine-based packing have been reported. When sinus surgery is performed in conjunction with rhinoplasty, there is a possibility of paraffine ointment migrating into intranasal incisions or osteotomy sites. Paraffine-induced foreign-body reaction forms lipogranulomas, paraffinomas, oleogranulomas, oil granulomas, sclerosing lipogranulomas, and myospherulosis masses.</p>

	<p>conjunction with a rhinoplasty, there is a possibility of petroleum ointment migrating into intranasal incisions or osteotomy sites. And they induce foreign-body reaction, which form mass described as lipogranulomas, paraffinomas, oleogranulomas, oil granulomas, sclerosing lipogranulomas, and myospherulosis.</p>	
17	omitted	omitted
18	<p>Even the body's own lipids, for example after a trauma, can induce a granuloma of a foreign body type. This lipophagic granuloma leads to an enzymatic lysis and is completely reabsorbed. Paraffin, however cannot be eliminated because of the lack of a specific lipase.</p>	<p>The body's own lipids, post trauma, can induce a foreign-body type granuloma called a lipophagic granuloma. This lipophagic granuloma leads to an enzymatic lysis resulting in complete reabsorption. Paraffin, however cannot be eliminated because the body lacks of a specific lipase to accomplish this.</p>
19	omitted	omitted
20	<p>In patients in whom ointment is placed, the mass is believed to be a result of a combination of factors. The first is an injury to the lamina papyracea, which provides a pathway into the orbit. The second is postoperative bleeding and hematoma formation inside the orbital cavity. So the exogenous lipid then migrates to the anterior orbit and eyelids through hemorrhage as a result of packing pressure. This in turn causes necrosis of orbital adipose tissue and accumulation of free extracellular fat. This then leads to a reaction and formation of the lipogranuloma. The second set of factors that leads to orbital lipogranulomas after sinus surgery starts with placement of petroleum-based gauze for control of bleeding. The ointment is then pushed into the soft tissues and causes a foreign-body reaction that leads to the formation of the lipogranuloma.</p>	<p>Surgeries in which paraffine-based ointments are used are believed to sometimes result in post-operative mass formations a result of one or more of the following processes:</p> <ol style="list-style-type: none"> 1. injury to the lamina papyracea creates a pathway for the paraffine-based ointment to leak into the orbit-surrounding tissues and cause a foreign-body reaction eliciting lipogranuloma formation; 2. postoperative bleeding and hematoma formation inside the orbital cavity causes orbital adipose tissue necrosis during which free extracellular fat accumulation which also can lead to a reaction forming lipogranuloma.
21	omitted	omitted
23	<p>But if we encounter the case as above reported, we should pay attention to points as follows: (1) diagnosis: history of ESS, use of nasal packing ,CT image result analysis, Gross appearance of the mass combining with histopathological examination. (2) Differential diagnosis: mucous cysts or epidermoid cysts, which have similar symptoms after rhinoplasty and ESS. (3) Treatment: few reports about natural disappearance of paraffinoma, reports about the effect of steroids on paraffinoma, but not many cases in which steroids were effective.</p>	<p>When encountering cases such as that described above, attend to the following: (1) diagnosis: history of ESS, nasal packing use, CT image result analysis, gross appearance of the mass as combined with histopathological examination; (2) differential diagnosis: mucous cysts or epidermoid cysts, which have similar post-rhinoplasty and ESS symptoms; and, (3) treatment: radical treatments should be taken, particularly resection operation should be considered first.</p>

24	And it is difficult to completely remove paraffin that has spread extensively, thus the surgery should be operated by experienced surgeon and surgical techniques are selected according to the size and location of the tumor.	Where possible entirely eliminate paraffine-based packing.
25	In conclusion, paraffinoma may develop in the periorbital area (upper or lower eyelids) following endoscopic sinus surgery, which uses antibiotic ointments containing any lipid-based substances for postsurgical packing of the nose, paranasal sinuses, and related structures of the head and neck. paraffinoma is thus an iatrogenic rare condition which seems preventable by avoiding the use of antibiotic ointments. When encountering inexplicable periorbital granulomas, we suggest that surgical removal should be considered in cases of repeated failure of conservative therapies including intralesional or systemic corticosteroids. Ophthalmologist should recognize the possibility of granulomatous reactions associated with nasal packing ointments and the need to refine the techniques of excise surgery.	Paraffinoma is an iatrogenic, but rare condition, which appears preventable by avoiding paraffine-based ointment use. When encountering inexplicable periorbital granulomas, we suggest that surgical removal should be considered in cases of repeated failure of conservative therapies including intralesional or systemic corticosteroids. Ophthalmologists should recognize the possibility of granulomatous reactions associated with nasal packing that is paraffine-based nasal packing and the need to refine the techniques of excise surgery.