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Clinical research of interventional treatment of maxillary sinus cyst

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ABSTRACT

Aim: To evaluate the effect of intervention of minimally invasive treatment of maxillary sinus cyst. **Methods:** Patients which were negative for iodine anaphylactic test were selected Piercing into the maxillary sinus cyst through the appropriate path, and infusion, injection drug, line imaging review after one month. **Results:** 34 cases operation were successful, including 4 cases of repeated puncture pumping liquid medicine injection, 1 case of puncture under X-ray guided. Symptoms such as headache, dizziness, fade in 1 to 2 weeks after surgery. Symptoms of all patients eliminated in 1 month, 1 month after surgery review of the sinus CT showed that maxillary sinus cyst disappeared. There was no recurrence after six months to one year of follow-up. **Conclusion:** Interventional therapy of maxillary sinus cyst is safe and effective. © 2014 Trade Science Inc. - INDIA

KEYWORDS

Maxillary sinus cyst;
Interventional therapy.

INTRODUCTION

At present the surgery is the only treatment of maxillary sinus cyst with symptom. How to both thoroughly remove sinus cyst, and reduce tissue damage and complications, is a important topic which the otolaryngology department clinicians have been discussed^[1]. This research method is a kind of non-surgical methods, intervention minimally invasive treatment of maxillary sinus cyst, Studies have been conducted from only the perspective of sinus cyst treatment, not destroying the normal structure of nose- sinus, not damaging the nor-

mal function of nasal sinus mucosa, In September 2008 to December 2013 34 cases of sinus cyst have been treated by interventional therapy, now report as follows.

MATERIALS

Sample collection: 34 patients with maxillary sinus cyst, male 21 cases, 13 cases of female; Age 14 to 76 years old, average 46.6 years old. Concurrent sinusitis and allergic rhinitis, hypertrophic rhinitis 9 cases, 25 cases of submucosal simple maxillary sinus cyst, including multiple cyst 1 case, bilateral maxillary sinus cyst 2 cases.

Diagnostic criteria

All cases were confirmed by sinus CT or MRI examination, among them 3 cases were confirmed by sinus CT examination for maxillary sinus cyst, no self-conscious symptom, the rest of the 31 cases have varying degrees of headache, dizziness, head heavy, ipsilateral above your teeth, facial numbness, intermittent nasal cavity flow pale yellow liquid, merge the symptom such as chronic sinusitis. Paranasal sinus CT scan or MRI in preoperative, cyst diameter 2.3 cm to 3.6 cm, average 3.1 cm; 32 cases of unilateral, 2 cases of bilateral 21 cases located in the anterior wall of maxillary sinus cyst, 9 cases of debir and 4 cases of outside wall.

Exclusion criteria

Other nasal diseases were ruled out in all patients, at the same time nasal endoscopic routine inspection, regular tests and conventional iodine allergy test were conducted, no absolute surgery taboo^[2].

METHODS

Iodine allergy were tested for all the patients before treatment, After intravenous push note brahman shadow puamine, the presence of allergic reactions were observed; The treatment was conducted under local anesthesia for the patients of no allergic reaction, anesthesia methods were tetracaine adrenal cotton surface anesthesia and/or 2% lidocaine local infiltration anesthesia; The third step, the path of the nasal passages maxillary sinus puncture point into the maxillary sinus was choosed, when cysts were large or located in maxillary sinus anterior wall and outer wall, remove the needle core, take out pouch liquid; The fourth step, inject a certain amount of patent medicines. If the cyst is small, or located in the bottom of the maxillary sinus wall, or which is not easy to be reached through the nasal passages puncture point, the path of labial gingival groove into cyst was choosed after local infiltration anesthesia, take out pouch liquid, then inject a certain amount of patent medicines. Under X-ray guided puncture was choosed, when the cyst is not easy to be reached through the routine puncture point. No postoperative nasal cavity filling, 1 month after surgery review sinus CT.

RESULTS

Standard of curative effect

After treatment symptoms of headache, dizziness, ipsilateral above teeth discomfort disappeared in patients, and After 1 month review sinus CT or MRI, cysts disappear as cure standard.

Results of the treatment

34 cases operation were successful, including 4 cases of repeated puncture, pumping liquid and injection, 1 case of puncture under radiation guided. Patients's symptoms such as headache, dizziness, fade in 1 to 2 weeks after surgery. Symptoms of all patients eliminate in 1 month, 1 month after surgery review of the sinus CT or MRI showed that maxillary sinus cyst disappeared. There was no recurrence after six months to one year of follow-up.

Typical cases

Patient, male, 43 years old, because of "Have a headache for 15 years, increased with the right buccal facial pain for half a year" in 2012-12-10 in our department, due to "catch a cold" 15 years ago, the patient has nasal congestion, pus, whose symptoms subsided after drug treatment, after that the patient pay no attention to recurring headache, the half-year headache is aggravating, fullness sensation appears on the right cheek, at the same time the above tooth of the right side pain, discomfort, no pus stuff, congestion, in 2012-12-10 in our hospital head MRI showed: maxillary sinus cyst on the right side. Improve the routine inspection and test, the patient has no absolute surgery taboo, iodine allergy test (-), tetracaine adrenal cotton piece line on the right side of nasal cavity surface anesthesia three times, from the inferior turbinate front end is about 1.5 cm puncture needle was inserted into the maxillary sinus, pull out the needle core, plug in 10 ml sterile syringes, back to pull light yellow slightly turbid liquid 2.4 ml, withdrawal of syringes, connect already on extraction of patent medicine syringes, 2.2 ml of liquids was injected, pull out the needle, placed tetracaine adrenal cotton piece on puncture hole, take out the cotton piece after bleeding satisfaction, the patient's head hold high 6 hours, with oral postoperative promoting agent for 7 days. Postoperative 1 month review of paranasal sinus

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coronal CT showed: The maxillary sinus cyst on the right side disappear. Patient's headache, right cheek tenderness, all the above teeth discomfort subsided (Figure 1, Figure 2).



Figure 1 : MRI images before the treatment

DISCUSSION

Advantages and disadvantages of the traditional method

Maxillary sinus cyst was roughly divided into two kinds, because of the mucus gland jam, glands secretion retention caused cyst, called mucous cyst; If because of inflammation, allergy, which caused a serous effusion from capillaries, lead to cyst formation, called serous cyst^[3]. Small cyst has no obvious symptoms, when cyst was larger or maxillary sinus was blocked, the symptoms such as headache, dizziness would appear. Due to the bottom of the maxillary sinus wall closed

the same side above the tooth root, on the same side teeth symptoms may also appear, cyst burst may have intermittent nasal symptoms such as light yellow clear liquid flowing. Patients who have no symptoms general don't chose surgery, but watching cyst, those who have symptoms or heart pressure was heavy may chose surgery. The traditional Caldwell-Luc's operation and the nasal passages fenestration, whose surgical trauma is bigger, postoperatively, local reactions of operation area is heavier, sinus self-cleaning function is poorer^[4]. Caldwell-Luc's operation usually need to cut the maxillary sinus anterior wall bone at least 1.5cm×1.5cm^[5], destructive is stronger, postoperative reaction in patients was heavier, there may be complications such as facial swelling, teeth pain, and that cannot effectively solve the problem of the natural sinus drainage, currently a tendency which would be gradually replaced was in popular^[6]. The nasal endoscopic surgery has advantages of good lighting conditions and large angle^[7], compared with traditional operation method, although less trauma, but currently use to remove the processus uncinatus more dash forward fully expand on maxillary sinus natural method remove cysts, which destroyed the normal structure and function of maxillary sinus, Xu Geng believed that processus uncinatus barriers disappear after it was removed, air entrainment in all kinds of pathogenic factors such as bacteria, viruses, allergen could be directly into the maxillary sinus cavity, which damage sinus mucosa cilia clearance function, and lead to fluid retention and secondary infection. Maxillary sinus mouth excessive expansion reduces NO concentration of maxillary sinus, but also reduces the maxillary sinus's ability to fight infection. One of the complications of nasal endoscopic surgery-cavity adhesion, affects nasal ventilation and drainage, at the same time maxillary sinus ventilation and drainage are involved, and is also one of the causes of maxillary sinusitis. And single nasal passages open window path, it is difficult to eradicate lesions, and prolong the operation time, increase the patient's pain^[8]. Anatomy characteristics of the maxillary sinus^[9], The shape of maxillary sinus like a vertebral body, And objectively formed some parts which were difficult to view and handle through nasal passages, So the nasal endoscopic maxillary sinus cyst surgery also has certain limitations^[10], And complications of nasal endoscopic surgery can cause a certain

pain in patients.

Advancement, applicability and scientificity of the method

The method of treatment of maxillary sinus cyst introduced by this topic is application of maxillary sinus puncture operation, a kind of mature technology, Puncture, infusion, injection of patented drugs were conducted under the accurate positioning of the sinus CT. Effect which was confirmed by experiment is exact, reliable. Mature technical operation indicate that this method has good clinical application. Compared with the traditional maxillary sinus cyst treated and nasal endoscopic maxillary sinus cyst resection, this method minimize trauma, and does not destroy the normal structure of maxillary sinus and nasal cavity, and pay attention to the relationship of "structure - symptoms - function", thus confirmed this method in the field of treatment of maxillary sinus cyst has certain advancement.

CONCLUSION

This method is mature, safe, effective, for patients with traumatic small and need not be in hospital, reduce the economic burden for patients, to avoid the surgery for patients, worth clinical promotion.

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