

MEDICAL SCIENCES

DIAGNOSIS OF COMPLICATIONS OF ENDODONTIC TREATMENT

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Abstract

Despite the high level of instrumental provision in therapeutic dental procedures, which allows the use of modern technologies, a wide selection of filling materials, complications during endodontic dental treatment are not uncommon [1–3].

Noteworthy is not only the number of complications, but also a fairly frequent increase in the frequency of severe consequences of treatment, which lead to irreversible changes in the tissues of the maxillofacial area and disturbances in their function [4].

Keywords: filled dental canals, periodontal condition of the treated tooth, evaluation of endodontic treatment.

A characteristic zone of movement of filling material or instrument into the mandibular canal, maxillary sinuses and periapical bone tissue has been established. The anatomical features of each tooth are of great importance in the occurrence of complications of endodontic dental treatment; topographical and morphological features of dental tissues and their functional significance; assessment of the condition of the periodontium surrounding the tooth [5].

Purpose: to determine the features of clinical, radiological and neurological manifestations of complications endodontic dental treatment.

Material and method of research

41 patients with various endodontic complications were examined,

Most of the patients were young and middle-aged: 38 years (92.68%); over 60 years old – 3 (7.32%), with 80.6% women and 19.4% men.

According to the location of the foreign body, patients were divided into three groups:

patients with the presence of a foreign body in the area of the mandibular canal - 9 (21.95%) people; second group patients with the presence of material in the cavity of the maxillary sinus - 15 (36.59%) people; in the third group - patients with material located outside the apex of the tooth in the bone tissue - 17 (41.46%) people.

The most common complications of endodontic treatment were observed in the treatment of molars – 70.1% of observations.

The duration of the disease from the end of endodontic treatment to the time of examination varied from 1 to 6 months.

Along with traditional clinical examinations, an analysis of complaints, anamnesis data, an assessment of the general condition, local manifestations of the disease were considered, the localization of a foreign body

was determined using dental intraoral radiography, orthopantomography and spiral computed tomography of the jaw bones [6]. Tissue sensitivity was assessed by comparative palpation of the skin and mucous membranes in the areas of innervation of the branches of the trigeminal nerve.

Research results and discussion

Displacement of the filling material (or instrument) in the area of the mandibular canal was detected in 9 patients aged from 29 to 62 years, mostly women. Most often, filling material in the area of the mandibular canal is observed in the treatment of the first (31.25%) and second molars (37.5%).

At the same time, the patients had local complaints in the form of throbbing pain in the lower jaw, impaired sensitivity of the lower teeth and the corresponding half of the lip and chin, and decreased sensitivity of the mucous membrane of the gingival membrane on the vestibular side. 3 patients had radiation pain in the temple and auricle. General complaints appeared in the form of irritability and anxiety, sleep disturbances, and loss of appetite.

In 2 patients the leading symptom was a neurological disorder in the form of decreased sensitivity. The pain symptom was weak and intermittent.

According to X-ray studies: the location of the filling material from the middle of the mandibular canal was found in 3 patients.

It was located in the projection of the mandibular canal.

Displacement of filling material into the maxillary sinus was detected in 15 patients.

The clinical manifestations of the disease depended on what form of sinusitis: swelling of the soft tissues of the cheek, smoothing of the nasolabial fold, headache, nasal congestion, discharge from the nasal

passage, pain in the jaw when closing the teeth, smoothness and pain on palpation of the transitional fold of the alveolar process, with unclear contours, which overlaps the projection of the maxillary sinus; signs of sinusitis; apexes of roots or roots of teeth in the projection of the maxillary sinus.

Thus, according to the results of the study, it was established that, regardless of the specific location of the foreign body, complications of endodontic treatment were always manifested by pain of varying intensity; - decreased sensitivity when placing filling material in the area of the mandibular canal (extra- or intra-canal).

- signs of the development of inflammation (limited or widespread from the mucous membrane of the maxillary sinus)

- persistent pain syndrome when moving the filling material into the bone tissue behind the apex of the tooth root.

To specify the zones and localize the foreign body, the results of X-ray studies, in particular spiral computed tomography, are decisive.

conclusions

The features of clinical and neurological manifestations of surgical complications of endodontic treatment depended on the area of localization of the foreign material.

The clinical picture was dominated by displacement of the filling material into the area of the mandibular canal

Severe pain and neurological disorders in the innervation of the branches of the trigeminal nerve.

When filling material gets into the maxillary sinus, the course of the disease predominantly occurs in the form of chronic or aggravated chronic sinusitis.

When placing filling material in the periapical bone tissue, local pain syndrome is observed.

Characteristic for all groups of patients was the lack of effect from the use of medications and physiotherapeutic methods of treatment.

3. For pain syndrome in patients, a clinical study is necessary supplemented with radiological data, in particular computed tomography.

Prospects for further research include improving methods for diagnosing complications of endodontic dental treatment and determining indications for surgical intervention.

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