Tonsillotomy: Fewer adverse effects at first, but renewed inflammation/surgery possible

March 23 2017

Repeated acute inflammation and enlargement of the palatine tonsils (in short: tonsils) especially affect children and adolescents. In Germany, no uniform indication for surgical removal of the tonsils has so far been established, either as partial (tonsillotomy) or complete (tonsillectomy) removal. Regional differences in the frequency of surgery are sometimes considerable.

The German Institute for Quality and Efficiency in Health Care (IQWiG) was commissioned by the Federal Joint Committee (G-BA) to investigate whether tonsillotomy offers advantages. According to the findings, the short-term advantages of tonsillotomy are opposed by its long-term disadvantages in comparison with tonsillectomy:

In the first 2 weeks after surgery, tonsillotomy is associated with less pain as well as fewer swallowing and sleeping problems. But after tonsillotomy, regrowing tissue may result in disadvantages: For instance, inflammation of the tonsils may reoccur even years later; therefore renewed surgery may also be required.

The benefit and harm of tonsillotomy in comparison with non-surgical management (e.g. watchful waiting) are unclear, as no studies on this topic could be identified.

Painful symptoms during swallowing, breathing and sleeping

The most common indications for tonsillectomy in children and adolescents are recurrent acute tonsillitis and enlargement (hyperplasia) of the tonsils. The inflammation of the tonsils (tonsillitis) is caused by viruses or bacteria and is accompanied by pain, swallowing problems and fever. Tonsillar hyperplasia can lead to a narrowing of the airways (obstruction) and thus also to breathing problems while sleeping (e.g. sleep apnoea syndrome).

Fewer postoperative problems in the short term

Within 2 weeks after surgery, less pain occurred, as well as fewer swallowing and sleeping problems, than with tonsillectomy. Hence a hint or an indication of lesser harm from tonsillotomy can be inferred.

However, for the further course after surgery, the data showed no hint of a greater or lesser benefit or harm in the comparison of tonsillotomy and tonsillectomy.

Long-term disadvantages possible through regrowing tissue

In relation to recurrent tonsillitis and other ear, nose and throat infections, the data provide a hint of a lesser benefit of tonsillotomy: 5 of 43 patients with tonsillar hyperplasia investigated in the Chaidas study experienced renewed inflammation in the remaining tonsillar tissue 6 years after tonsillotomy. In contrast, no further inflammation was shown in the 48 study participants with complete removal of the tonsils (tonsillectomy).

Because during tonsillotomy the tonsillar tissue is only partly removed, there is a risk of regrowing tissue and thus of the recurrence of symptoms. In addition, further surgery may be required. But due to

insufficient data on renewed tonsillar surgery, for this outcome there is no hint of a benefit or harm of tonsillotomy in comparison with tonsillectomy.

Benefit and harm remain unclear in many ways

Only 1 of the 19 relevant studies on tonsillotomy is considered to be with a low risk of bias; all other 18 studies provide only moderately reliable to unreliable results. In addition, with only one study available on the outcome of health-related quality of life, the evidence base is more than sparse.

Potential advantages of tonsillotomy commonly mentioned in the scientific literature (e.g. a lower rate of postoperative complications such as infections and bleeding as well as faster recovery) are not confirmed by the study data available: With regard to patient-relevant outcomes such as postoperative bleeding, length of hospital stay, (renewed) hospitalization, and health-related quality of life, the study data provided no hints of a benefit or harm of tonsillotomy in comparison with tonsillectomy. Likewise, due to a lack of data on mortality, no conclusion on benefit can be made for this outcome.

No studies at all could be identified on the comparison of tonsillotomy with non-surgical management (e.g. watchful waiting), so that benefit and harm also remain unclear here.

Process of report production

IQWiG published the preliminary results in the form of the preliminary report in November 2016 and interested parties were invited to submit comments. At the end of the commenting procedure, the preliminary report was revised and sent as a final report to the commissioning agency

in January 2017. The written comments submitted were published in a separate document together with the final report. The report was produced in collaboration with external experts.

Provided by Institute for Quality and Efficiency in Health Care