

9: Upper GI endoscopy (via the nose)

Main author: Takama Maekawa

Endoscopy was performed in 9 of 10 thalidomide-impaired patients who came for checkup in FY2012 and all 8 patients who came for checkup in FY2013— a total of 17 patients. After we explained the difference between transnasal and transoral endoscopy, 11 patients chose transnasal endoscopy and 6 chose the transoral route. Based on this experience, we prepared this Q&A for physicians and nurses performing checkups on thalidomide-impaired patients using transnasal endoscopy for the first time.

Q9-1: Is the choice between transnasal and transoral routes made in the usual way?

Transnasal endoscopy has recently been developed to provide an expanded visual field and improved resolution, and is now very close to transoral endoscopy in terms of performance. Transnasal endoscopy produces very little pain and does not require the use of sedatives. Therefore, as long as transnasal endoscopy is not contraindicated, we consider it to be the best choice for examinations, although the transoral route should, of course, be selected if the patient requests it. Two-thirds of the thalidomide-impaired patients endoscopically examined by us chose the transnasal and one-third chose the transoral route.

Q9-2: Are any patients contraindicated for transnasal endoscopy?

The nasal route is contraindicated in patients with bilateral obstructive disease of the nasal cavities and the epipharynx. Use of the nasal route may not be possible in patients with otolaryngologic diseases or after surgery for such diseases. This route can be used in patients taking antithrombotic agents, but is contraindicated if there is a tendency to bleed because of an underlying disease that involves significant reduction in platelets, such as liver cirrhosis. A history of aspirin-induced asthma is also a contraindication for nasal endoscopy, because of the possibility of induction of aspirin-related asthma due to the parabens that is used as a preservative in Xylocaine products (other than 8% Xylocaine spray), i.e. Xylocaine jelly, Xylocaine viscous and 4% Xylocaine liquid. Naphazoline nitrate nasal drops are contraindicated in patients using MAO inhibitors, because they can cause a rapid increase in blood pressure. None of the patients examined by us were contraindicated for transnasal endoscopy.

Q9-3: Is the transnasal endoscopy procedure the same as for normal patients?

It is basically the same, but we use explanatory cards to help hearing loss patients understand the test procedure.

9: Upper GI endoscopy (via nose)

Q9-4: Does transnasal endoscopy take the same amount of time to perform as transoral endoscopy?

For both the transnasal and transoral routes, the examination starts about 30 minutes after the patient takes Gascon and Pronase to clear gastric mucus and bubbles, in order to facilitate observation of the stomach. During this period, the transnasal route requires a little time to open up the nasal cavity and administer an anesthetic agent and a vasoconstrictor to prevent bleeding. As with other cases, transnasal endoscopy takes about 1.5 to 2 times longer than endoscopy by the transoral route from scope insertion to removal, although the longer time is not a problem because the transnasal route involves very little pain.

Q9-5: Are there any precautions to be observed when performing transnasal as opposed to transoral endoscopy?

The usual precautions apply. The endoscopist should encounter no technical problems performing the procedure as long as he/she has a thorough grounding in transoral endoscopy, and has reviewed his/her understanding of the properties of the instruments and anatomical or pathological knowledge covering the field of otolaryngology. However, compared to transoral endoscopy, the endoscopist needs to make a greater effort and adopt a more proactive attitude towards ensuring nothing is missed. The endoscopist must also adjust structural enhancement and color to make it easy to see microscopic lesions, mucosal atrophy, collecting venules, etc.

Q9-6: What brand of transnasal endoscopes do you use?

Fujifilm, Olympus and Pentax currently have transnasal endoscopes in the market. We use the Olympus GIF X-P260NX. Fujifilm has always been the leader in terms of image quality, but there is little difference between each company's latest models. It is wise to choose the latest models, as these have a 140-degree field of view, improved clarity and resolution, better water delivery and suction function and improved biopsy capture.

Q9-7: Are sedatives necessary for transnasal endoscopy?

Since transnasal endoscopy is far less painful than transoral endoscopy, sedation is completely unnecessary. All our recent patients were able to undergo problem-free examination comfortably without the use of sedatives.

Q9-8: Is pretreatment for transnasal endoscopy in thalidomide-impaired patients the same as for other patients?

The standard pretreatment for performing transnasal endoscopy requires no changes, other than

the use of explanation cards during pretreatment for patients with hearing loss.

Our center's pretreatment procedure is as follows:

1. 30 minutes before examination: The patient is given Gascon drops 5 ml + water 100–200 ml + Pronase 20,000 units + sodium bicarbonate 1g.
2. 15 minutes before examination: 0.15 ml of vasoconstrictor (Privina) is injected into the nasal cavity in order to open up and reduce swelling in the nasal cavity.
3. Nasal cavity anesthesia: We use the one-stick method. After selection of the nasal cavity with the best airflow, Xylocaine Jelly is injected into the nostril in two 2 ml doses (total lidocaine dose 80 mg). Next, a small amount of Xylocaine jelly is painted onto a 16Fr transnasal endoscopy pretreatment stick, which is then inserted 8–9 cm into the nasal cavity with best airflow and removed after 90 seconds. Pharyngeal anesthesia just before examination is unnecessary.
4. Administration of antispasmodic agent: Buscopan is not essential, but if used, can improve the quality of examination.

Q9-9: How do you choose between left and right nasal cavities?

The standard methods can be used. The side with the best airflow is chosen by inhaling through each nostril, with the opposite nostril pressed in turn. If there are any difficulties, airflow can be objectively evaluated using the nasal breathing CD disc method. We encountered no patients in who we needed to change to the opposite nasal cavity or from the transnasal to transoral route.

Q9-10: Are there any problems with body position during transnasal endoscopy?

The same position is used as for transoral endoscopy with no problems.

Q9-11: Were there any anatomical abnormalities or characteristic abnormal findings?

Different otolaryngologic regions can be observed via each route. Transnasally, the nasal cavity and epipharynx on the left side can be examined, but part of the oral cavity and mesopharynx that are visualized transorally cannot be observed. We saw no anatomical abnormalities in these examinations. The epipharynx had no notable abnormalities. In the stomach, 9 of 17 patients had no atrophy and no history of H.Pylori infection, and 4 of these had GERD L-A grade A. Four patients had closed-type atrophic gastritis and 4 had open-type atrophic gastritis, but neither of these were characteristic findings.

Q9-12: Did any patients have nosebleeds?

None of these patients had nosebleeds, and, in most cases, nosebleed can be stopped by the application of pressure. If bleeding continues, standard hemostatic methods can be used, such as

9: Upper GI endoscopy (via nose)

nasal sponges.

Q9-13: Do these patients need any particular kind of assistance?

It is important to help patients relax by treating them in a friendly manner. Further, hearing loss patients should be given an easy-to-follow explanation using explanation cards. Sedation is completely unnecessary, but physical touch, such as rubbing the patients back, for example, is effective in getting them to relax. Since the transnasal route is far less painful than the transoral route, patients might also find the examination more relaxing if they are given an explanation of the procedure while watching it on a submonitor, if they so desire.