



Method Selection in the Treatment of Achalasia

Akalazya Tedavisinde Yöntem Seçimi

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My dear readers,

Our topic in this article is which method should be preferred in the treatment of achalasia?

Achalasia is a primary esophageal motility disorder. It is a disease that manifests itself as difficulty in swallowing due to the absence of peristalsis in the esophagus and the inability to relax the lower esophageal sphincter. Sir Thomas Willis first described achalasia in 1672. In 1929, Hurt and Rake realized that the disease was caused by an inability to relax the lower esophageal sphincter (LES). They used the term achalasia which meant inability to relax.

It is seen in 1.8 to 12.6 people per 100,000 in the population. Although it is shown that the gender distribution is equal in some publications, it is accepted that it is slightly more common in women. Although the age distribution varies between 20-60 years, it is most commonly seen in the 35-45 age group (1).

The primary etiology of achalasia is believed to be selective inhibitory neuronal loss in the myenteric plexus of the distal esophagus and lower esophageal sphincter, resulting in a neuronal imbalance in excitatory and inhibitory activity. Excitatory neurons secrete acetylcholine, while inhibitory neurons mainly secrete vasoactive intestinal peptide and nitric oxide. This imbalance ultimately results in a hypertensive lower esophageal sphincter that cannot relax (1,2). The thickness of the muscles in the esophageal wall and the lower end valve may reach 2-3 times the normal. Due to this situation, the lid at the lower end does not

allow the passage of foods, as it cannot relax during swallowing and because the muscle thickness increases excessively.

What are the Symptoms of Achalasia?

Since the symptoms of the disease appear gradually, its recognition is often delayed. Dysphagia is the most important symptom of achalasia. The patient has difficulty swallowing both solid and liquid foods. Regurgitation is the return of food residues accumulated in the esophagus to the mouth and is the second most common symptom. This condition can be confused with reflux disease. If the regurgitation happens at night, food residues escaping back can block the trachea. Chest pain is another common symptom in achalasia. Patients with achalasia eat slowly. They usually have water with them and drink water immediately after the bite. Patients are afraid to eat in public. Frequent pulmonary complications can be seen and accordingly their general condition deteriorates over time. Another common complication is damage to the esophagus. Bleeding and anemia may occur due to this. Although rare, rhythm disturbances in the heart and rupture in the esophagus can be seen. The most important problem is the risk of developing cancer. Cancer may develop in 2 to 7% of patients due to prolonged achalasia or food irritation and esophagitis.

How is Achalasia Diagnosed?

Achalasia should be considered in patients with swallowing difficulties. These patients should first undergo endoscopy. Thus, achalasia is differentiated from other diseases that cause swallowing difficulties such as esophageal cancer, stomach cancer

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and esophageal strictures. If necessary, a biopsy is taken and sent for analysis. Barium esophagogram is a valuable method in diagnosis. The esophagus appears enlarged and the tip of the esophagus is thinned and has the appearance of a bird's beak in barium esophagogram. However, if the esophagus is not enlarged yet in early-stage patients, there may be errors in the diagnosis. Examination of the contraction movements of the esophagus during swallowing with a device which we call Esophageal Manometry is the most important examination method for diagnosis. Loosening and contraction of the lids may be observed. In manometry, the contraction disorder in the esophagus muscles can be easily seen and the lower lid does not open during swallowing. The high pressure here during swallowing is diagnostic. High resolution manometry is accepted as the current gold standard test in the diagnosis of achalasia (3,4).

How is Achalasia Treated?

Dear readers,

I always advise my students to rank the diagnosis and treatment from simple to complicated, from inexpensive to expensive, from non-invasive to interventional methods. Here we apply the same rule. The Chicago Classification helps us in determining the treatment (5,6). It is recommended to apply an algorithm as follows: (1) Patients with suspected symptomatic achalasia should undergo upper endoscopy to exclude another pathology and pseudoachalasia. High-resolution manometry (HRM) and barium esophagogram are performed to confirm the diagnosis. After the diagnosis is finalized, the treatment method is selected according to the manometric subtypes of achalasia (Chicago classification), patient preference and the experience of the doctor. In type I and II achalasia, balloon dilation should be done gradually. If there is no response to this, surgical myotomy should be performed. Appropriate treatment for type III achalasia may be surgical myotomy or POEM (Peroral Endoscopic Myotomy). Surgical myotomy can be performed either openly or laparoscopically. It is mostly performed laparoscopically and laparoscopic myotomy is the most effective method that we use today in the treatment of achalasia. It is preferred in patients younger than 40 years of age, patients with recurring symptoms after endoscopic balloon dilatation, patients with esophageal folds, diverticulum, very dilated (greater than 8 cm) or previous esophageal surgery. The effectiveness of surgical treatment is higher than other treatment methods. We perform our operations laparoscopically in our center and simultaneously check the effectiveness of the operation and whether there is any damage to the mucosa with gastroscopy. The basic procedure here is to cut the muscles that cannot relax, namely myotomy. During the procedure, we usually add one of the antireflux procedures to prevent gastroesophageal reflux that may develop after the surgery. In this way, the patient has a more comfortable follow-up period than other procedures, as the reflux complication after the intervention is reduced.

After the intervention, patients should be followed up with barium esophagogram and endoscopy for symptom recurrence

and reflux complications. In patients in whom the disease recurs, balloon dilatation, surgical myotomy or POEM can be applied again, depending on the availability.

If patients are not suitable for definitive treatment for some reason, if they have comorbidities, smooth muscle relaxants such as calcium channel blocker (Nifedipine) or nitrate (Isosorbide dinitrate) and botulinum toxin can be used. The effect of botulinum toxin injection is temporary and can last for 6 to 12 months.

My dear readers,

To summarize; most diseases of the esophagus are associated with motor function. I would like to emphasize once again how important the function of eating and swallowing is for a healthy life. In patients with swallowing difficulties, it is necessary to exclude life-threatening diseases such as cancer. For this reason, achalasia should be considered in patients with any dysphagia and gastroesophageal reflux disease who do not benefit from drug treatment. Before treatment, gastroscopy and high-resolution manometry should be performed. Although each patient is evaluated individually, surgery is the most effective treatment method in these patients. Another thing that patients should not forget is that they will not have the opportunity to eat whatever they want, like in the pre-disease period. After the treatment, they will learn over time what and how much they should eat with their own experiences. The success of the treatment is directly proportional to the experience of the center and the physician. As one of the centers that perform the most of the achalasia surgeries in Istanbul, our experience has shown that if there are complaints of difficulty in swallowing, feeling of being stuck, waking up like choking at night, a specialist should definitely be consulted and necessary examinations should be made.

All the best, I wish you a healthy day...

References

1. Vaezi MF, Pandolfino JE, Yadlapati RH, Greer KB, Kavitt RT. ACG Clinical Guidelines: Diagnosis and Management of Achalasia. *Am J Gastroenterol* 2020 Sep;115:1393-411.
2. Gyawali CP. Achalasia: new perspectives on an old disease. *Neurogastroenterol Motil* 2016;28:4-11.
3. Pandolfino JE, Gawron AJ. Achalasia: a systematic review. *JAMA* 2015;1841-52.
4. Kahrilas PJ, Bredenoord AJ, Fox M, et al. The Chicago classification of esophageal motility disorders, v3.0. *Neurogastroenterol Motil* 2015;27:160-74.
5. Pandolfino JE, Kwiatek MA, Nealis T, et al. Achalasia: A new clinically relevant classification by high-resolution manometry. *Gastroenterology* 2008;135:1526-33.
6. Kahrilas PJ, Bredenoord AJ, Fox M, Gyawali CP, Roman S, Smout AJ, et al. The Chicago classification of esophageal motility disorders, v3.0. *Neurogastroenterol Motil* 2015;27:160-74.