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Laryngological symptoms of gastroesophageal reflux disease

Laryngologiczne objawy choroby refluksowej przełyku

Grażyna Mierzwa, Anna Sinkiewicz

Klinika Chorób Naczyń i Chorób Wewnętrznych, Klinika Foniatrii i Audiologii, Collegium Medicum w Bydgoszczy, UMK w Toruniu
Poradnia Chorób Jelitowych, Poradnia Foniatryczno-Audiologiczna, Szpital Uniwersytecki Nr 2, Ul. Ujejskiego 75, 85-168 Bydgoszcz

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ABSTRACT: The artical presents a case of a 32 years old men with extraoesophagal symptoms of gastroesohagal reflux disease and laryngopharyngeal reflux. He was by ph-impedance monitoring, stroboskopy and gastrointestinal endoscopy with biopsy diagnosed. PPI therapy with dexlansoprasole was most efficient.

KEYWORDS: gastroesophageal reflux disease, laryngopharyngeal reflux, extraesophageal symptoms, proton pump inhibitors, treatment

STRESZCZENIE: W pracy opisano przypadek 32-letniego pacjenta z pozaprzełykowymi objawami choroby refluksowej przełyku i refluksem krtaniowo-gardłowym. Rozpoznanie postawiono w oparciu o monitorowanie impedancji-pH, stroboskopii oraz endoskopii przewodu pokarmowego z biopsją. Najskuteczniejszym podejściem terapeutycznym okazało się podawanie inhibitora pompy protonowej - dekslansoprazolu.

SŁOWA KLUCZOWE: choroba refleksowa przełyku, refluks krtaniowo-gardłowy, objawy pozaprzełykowe, inhibitory pompy protonowej, leczenie

The artical presents a case of a 32 years old men with extraoesophagal symptoms of gastroesohagal reflux disease and laryngopharyngeal reflux. He was by ph-impedance monitoring, stroboskopy and gastrointestinal endoscopy with biopsy diagnosed. PPI therapy with dexlansoprasole was most efficient.

CASE REPORT

A male patient, aged 32 (W.M., ID 580646) had been undergoing laryngological and phoniatric treatment due to persistent hoarseness of voice. The history included frequent episodes of pharyngitis, burning sensations in the pharynx, hoarseness and involuntary clearing of throat. The patient also reported periodically experiencing symptoms of GERD including burning within the esophagus, heartburn and unpleasant taste in the mouth. In 2014, laryngovideostroboscopic examination revealed a polyp of the right vocal fold. Examination summary: epiglottis unremarkable, vestibular folds symmetrical, whitish polyp-like mass ca. 3 mm in diameter in the right vocal fold, vocal folds mobility unremarkable, arytenoids symmetrical, piriform sinuses and lingual pit empty, vibrations of vocal folds simultaneous, identical, of bilaterally shortened amplitudes, mucosal wave evident, glottal closure complete, vocal folds level identical (Figs. 1, 2).

The polyp mass was removed in a microlaryngological procedure. An improvement was obtained with regard to laryngological symptoms; however, the patient still complained about periodic heartburn, recurrent hoarseness and throat clearing. The patient was diagnosed with GERD involving pharyngeolaryngeal reflux, and omeprazole was included in

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the treatment (single dose of 20 mg followed by 2 x 20 mg administration). The symptoms – both esophageal and extraesophageal – continued to occur with varying frequency.

The patient was referred from the Phoniatry and Audiology Outpatient Clinic to the Outpatient Clinic for Enteral Diseases for gastrological diagnostic examinations. As gastroesophageal reflux was suspected, endoscopic examination of the upper gastrointestinal tract was performed. Endoscopic features of GERD were confirmed including a small sliding hiatal hernia, type LA-B (Los Angeles classification) esophagitis with a single erosion ca. 1 cm in length, and minor mucositis within the antral part of the stomach. Histopathological examination confirmed grade 1 esophagitis while excluding *H. pylori* infection (mucosa antralis normalis H. pylori (-)). A proton pump inhibitor – esomeprazol at the dose of 1 x 40 mg (for 12 weeks), and an esophageal motility regulator – itopride were included in the treatment. Typical antireflux behaviors were recommended including appropriate number, type, quantity and regularity of meals, high elevation of the head in recumbent position, avoidance of uncomfortable positions during meals). Pantoprazol-group IPPs were continued (1 x 40 mg and later 1 x 20 mg/day) and neutralizers were administered as needed.

A follow-up gastroscopic examination revealed persistent features of endoscopic gastroesophageal reflux with sliding hiatal hernia and esophagitis of class LA-A (esophageal erosions <5 mm). Bioptates were collected for histopathological confirmation of grade 1 esophagitis, mucosa corporis normalis H.pylori (-).

In line with the diagnostic standards, the patient was subjected to 24-hour impedance-pH monitoring which revealed minor acidic gastroesophageal reflux and major laryngopharyngeal (proximal) reflux (93%), fully correlated with the reported heartburn symptom (Figs. 3 and 4).

Pharmacological treatment, consisting of reintroduction of protom pump inhibitors, was initiated. The PPI sequence consisted of omeprazole, pantoprazole and esomeprazole administered once daily and subsequently twice daily. Gastrointestinal motility stimulants (trimebutin, itopride) were also included and antireflux management was recommended. Follow-up laryngovideostroboscopic examination revealed as follows: epiglottis unremarkable, vestibular folds symmetrical, pale, with smooth edges and surfaces, vocal folds mobility unremarkable, arytenoids symmetrical, piriform sinuses and lingual pit empty, vibrations of vocal folds simultaneous, identical, of bilaterally shortened amplitiudes, mucosal wave evident, glottal closure complete, vocal folds level identical,

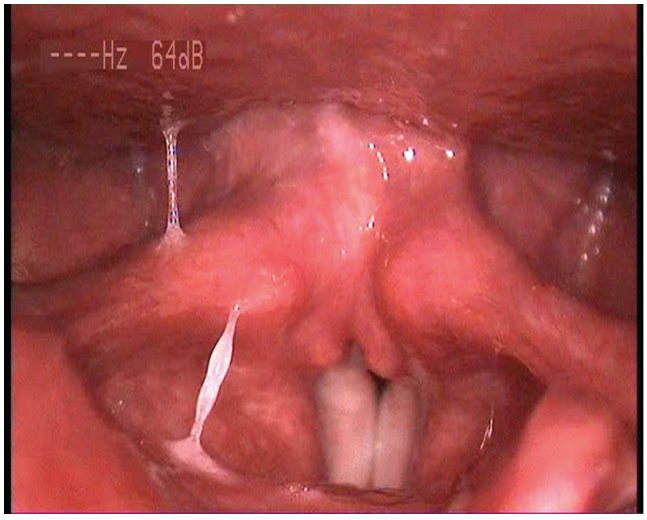


Fig. 1. Larynx – baseline examination

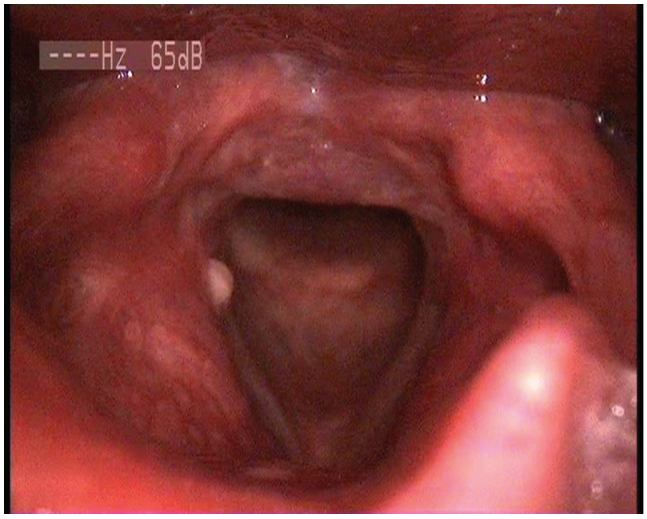


Fig. 2. Larynx – baseline examination

mucosa of entire larynx irritated, particularly in the intercartilagineous area (Fig. 5).

Despite the administered treatment, the symptoms – both esophageal and extraesophageal – continued to occur with varying frequency.

Then, a novel modified-release proton pump inhibitor, dexlansoprazole (Dexilant) was included in the study at the dose of 60 mg 1 x 1 after meals for 3 months and subsequently at the dose of 30 mg 1 x 1. The patient continues receiving dexlansoprazole at the dose of 30 mg 1 x 1/day. The treatment

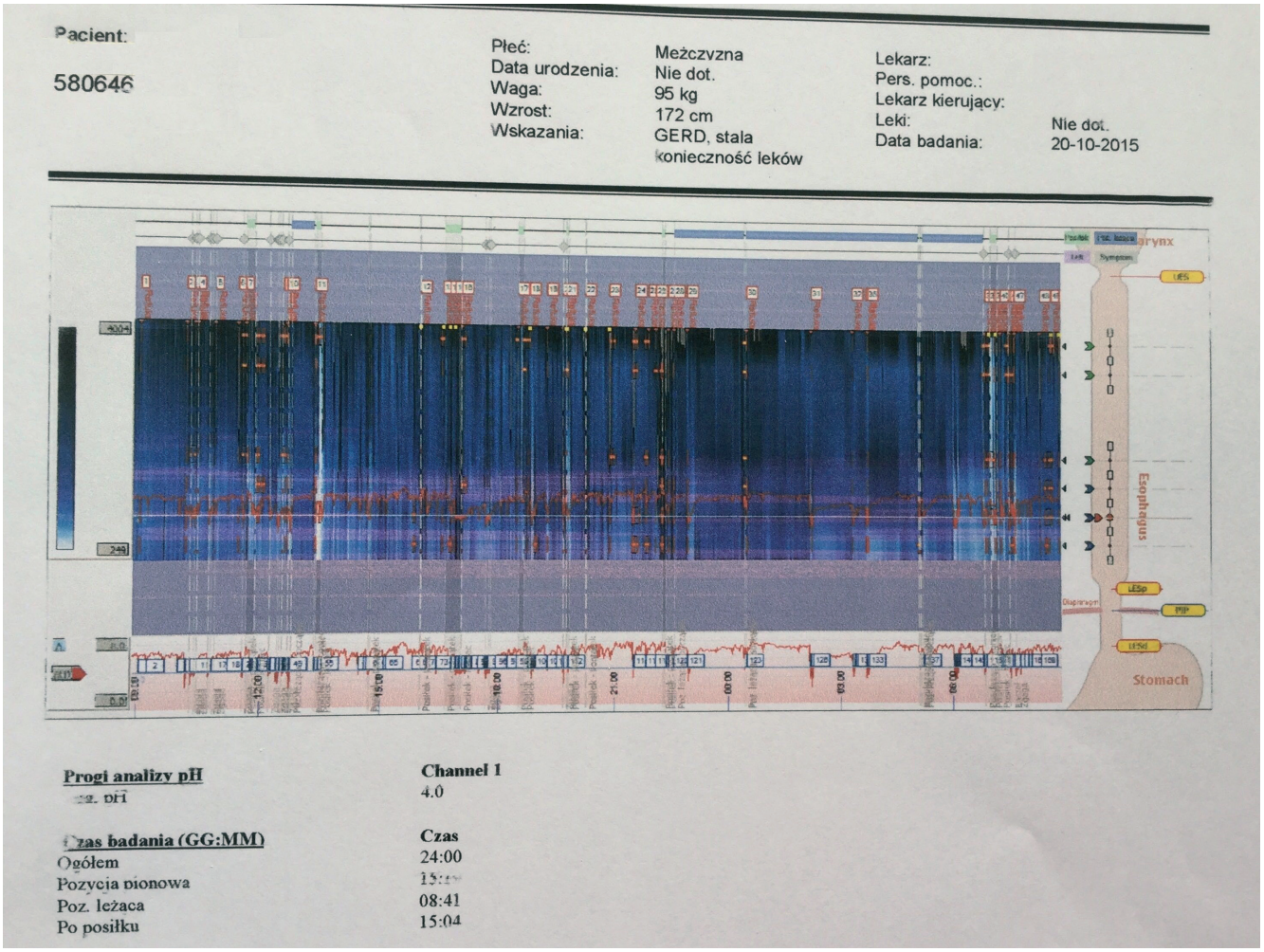


Fig. 3. 24-hour impedance-pH measurement graph.

outcome is very good with the troublesome symptoms being eliminated.

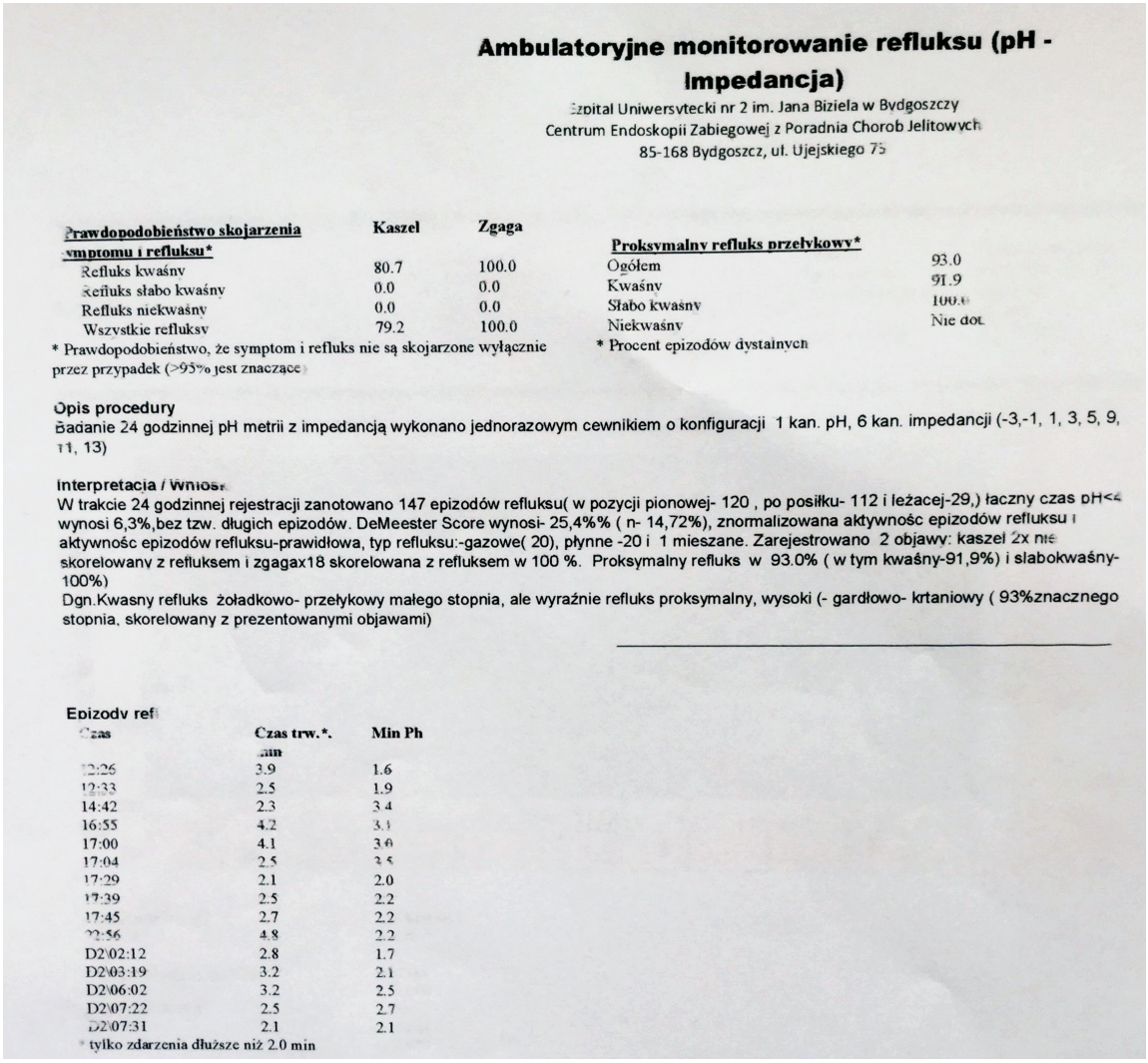
Patient is under continuous specialist care of phoniatry and gastrology clinics.

DISCUSSION

Gastroesophageal reflux disease is currently one of the most common disorders of the upper segment of the gastrointestinal tract.

Due to the intensity of gastroespophageal reflux symptoms, patients usually present for gastrological diagnostics. Besides accurate history, diagnostic methods include primarily the endoscopy of upper gastrointestinal tract with esophageal biopsy as well as the functional tests such as esophageal manometry, endoesophageal pH or impedance-pH testing [2–6]. Due to the numerpus extraesophageal symptoms of GERD patients are simultaneously under the care of laryngologists, pneumologists, allergologists, phoniatricians, and cardiologists. Laryngological symptoms experienced by GERD patients include mainly recurrent burning and sore throat, recurring hoarsness, aphonia and throat clearing, leading to laryngological and phoniatric diagnostics being extended by laryngovideostroboscopic examination. Changes in the laryngopharyngeal reflux (LPR) are described and assessed using the RFS scale (an 8-grade scale of pathomorphological symptoms of LPR) [7].

Appropriate treatment of GERD patients, particularly those with high pharnygeal reflux. Antireflux management including modification of lifestyle and food ingestion patterns including



Ambulatoryjne monitorowanie refluksu (pH - Impedancja)

Szpital Uniwersytecki nr 2 im. Jana Biziela w Bydgoszczy
Centrum Endoskopii Zabiegowej z Poradnia Chorob Jelitowych
85-168 Bydgoszcz, ul. Ujejskiego 75

Prawdopodobieństwo skojarzenia symptomu i refluksu*	Kaszel	Zgaga
Refluks kwaśny	80.7	100.0
Refluks słabo kwaśny	0.0	0.0
Refluks niekwaśny	0.0	0.0
Wszystkie refluksy	79.2	100.0

* Prawdopodobieństwo, że symptom i refluks nie są skojarzone wyłącznie przez przypadek (>95% jest znaczące)

Proksymalny refluks przełykowy*	
Ogółem	93.0
Kwaśny	91.9
Słabo kwaśny	100.0
Niekwaśny	Nie dot.

* Procent epizodów dystalnych

Opis procedury
Badanie 24 godzinnej pH metrii z impedancją wykonano jednorazowym cewnikiem o konfiguracji 1 kan. pH, 6 kan. impedancji (-3,-1, 1, 3, 5, 9, 11, 13)

Interpretacja / Wnios
W trakcie 24 godzinnej rejestracji zanotowano 147 epizodów refluksu(w pozycji pionowej- 120 , po posiłku- 112 i leżacej-29,) łaczny czas pH<4 wynosi 6,3%,bez tzw. długich epizodów. DeMeester Score wynosi- 25,4%% (n- 14,72%), znormalizowana aktywnośc epizodów refluksu i aktywnośc epizodów refluksu-prawidłowa, typ refluksu:-gazowe(20), płynne -20 i 1 mieszane. Zarejestrowano 2 objawy: kaszel 2x nie skorelowany z refluksem i zgagax18 skorelowana z refluksem w 100 %. Proksymalny refluks w 93.0% (w tym kwaśny-91,9%) i slabokwaśny-100%)
Dgn.Kwasny refluks żołądkowo- przełykowy małego stopnia, ale wyraźnie refluks proksymalny, wysoki (- gardłowo- krtaniowy (93%znacznego stopnia, skorelowany z prezentowanymi objawami)

Epizody ref

Czas	Czas trw.*. min	Min Ph
12:26	3.9	1.6
12:33	2.5	1.9
14:42	2.3	3.4
16:55	4.2	3.1
17:00	4.1	3.0
17:04	2.5	3.5
17:29	2.1	2.0
17:39	2.5	2.2
17:45	2.7	2.2
22:56	4.8	2.2
D2\02:12	2.8	1.7
D2\03:19	3.2	2.1
D2\06:02	3.2	2.5
D2\07:22	2.5	2.7
D2\07:31	2.1	2.1

* tylko zdarzenia dłuższe niż 2.0 min

Fig. 4. Impedance-pH meanurement summary

the types and the quantities of food as well as the quality and quantity of meals. Pharmacological treatment, however, plays the decisive role. Pharmacological treatment consists of administration of prokinetic drugs, alginates, mucosal liners, antagonists of H2 receptors and widely used proton pump inhibitor drugs [22]. Common PPIs, including omeprazole, pantoprazole, lansoprazolu are highly effective in the treatment of GERD and LPR [8–11]. Recently, a novel PPI was introduced to the market under the name of dexlansoprazole – a PPI isomer with established efficacy in the treatment of GERD patients, including patients with concomitant esophagitis and those with symptomatic heartburn [11–14]. The good effects of dexlansoprazole treatment are due to its higher strength compared to conventional PPIs and to its specific slow release. Administration of the drug regardless of meals is well accepted by the patients, contributing to the regularity of the treatment [8, 12–14].

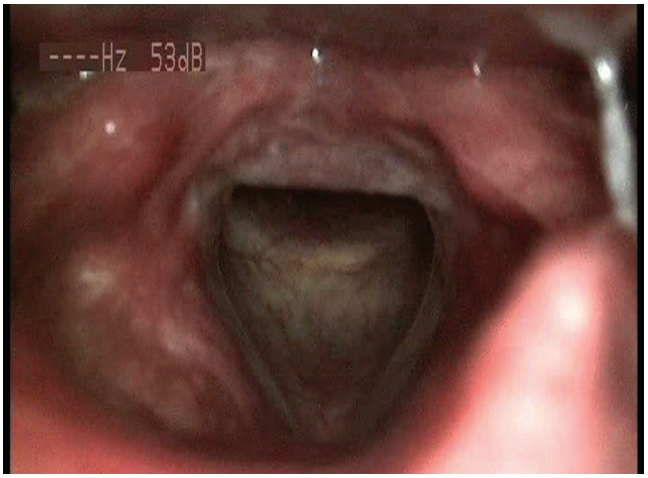


Fig. 5. Larynx – follow-up examination

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Corresponding author: Dr n. med. Grażyna Mierzwa; Klinika Chorób Naczyń i Chorób Wewnętrznych, Klinika Foniatrii i Audiologii Collegium Medicum w Bydgoszczy, UMK w Toruniu, Poradnia Chorób Jelitowych, Poradnia Foniatryczno-Audiologiczna, Szpital Uniwersytecki Nr 2, Ul. Ujejskiego 75, 85-168 Bydgoszcz; e-mail: mierzwagrazyna@wp.pl

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