DIFFERENTIATIVE ROENTGEN DIAGNOSIS OF MALABSORPTIVE SYNDROME

G. Uzunov

The term "malabsorptive syndrome" (MS) defines a group of heterogeneous diseases with a common sign — a defective absorption of the main components of food (carbohydrates, proteins, fats) in the small intestines. Clinically it is manifested by abundant, fatty, stenching faeces, loss of weight, abdominal intumescence, skin pigmentation, slow development, various insufficiencies such as folic acid, vitamin B₁₂, iron, B-complex vitamins, vitamin K, calcium and magnesium.

Greater part of the diseases which are clinically manifested with MS have characteristic Roentgen (X-ray) symptoms that allows a precise differentiative diagnosis (DD) by investigating the passage of the intestines with barium sulphate.

The object of the present study was to establish the diagnostical value of the X-ray examination of the digestive tract of 52 patients with MS accepted to our department in the period 1970—1980.

Materials and methods

Our study covers 19 patients of the group "spru", including the childish coeliac disease and non-tropical spru in adults, investigated by barium sulphate. The initial diagnosis was suggested only after the first X-ray examination. The intestinal biopsy, confirming the diagnosis, was performed to 9 of the patients; however, the final diagnosis was discussed after the effect of the glutenless diet (regimen). 6 of the studied objects were aged between 7 months and 1 year, 10 were between 1 and 14 years and the rest 3 — between 15 and 28 years.

The second group in our study was that one of children with lambliosis — 11 altogether, aged between 3 and 7 years. The diagnosis was discussed after the X-ray examination and then confirmed by the results of the investigation of bilecontent received through a duodenal catheter.

The rest 22 patients of our study were from various groups; 4 of them with gastrectomia, 4 — pancreatic insufficiency, 3 — regional enteritis, 2 — gastrointestinalesthesia, 2 — liver and bile disorders, 2 — illeoceacal TBC, 2 — scleroderma, 1 — lymphosarcoma, 1 — innate duodenal stenosis, 1 — mesenteral vessel insufficiency due to thrombangiitis.

Results and discussion

The patients with coeliac disease had in various degree all aforementioned intestinal disorders — dilatation, segmentation, fragmentation, floculation and hypersecretion. Temporary non-obstructive invaginations in two of the patients were registered but a passage prolongation was not reported. The
most constant symptom observed in every patient with a coeliac disease and non-tropical spru was the intestinal dilatation. It was excellently demonstrated in the graphs (the contrast substance was swallowed 1 hour before) of the

middle and distal part of jejunum (fig. 1). A 28-year old woman in a heavy clinical status and 22-kg weight-loss plus cachexia had only one single X-ray symptom: intestinal dilatation. The glutenless regimen improved totally her condition (fig. 2). The dilatation of intestines is never so constant with any disease than spru. Considerable dilatation was registered with 2 patients suffering from scleroderma, but the skin disorders in both cases preceded the intestinal ones.

Segmentation was established with most of the patients in later graphs, at the end of the second hour (fig. 3). The distal ileum was usually affected. A rough, unproper, irregular, snow-like floculation was detected after the evacuation of intestinal knots in the patients with an expressed segmentation.

The hypersecretion was manifested in various degree and hydroairy shadow-like spots were observed in 4 children. The mucous relief was smoother in 18 patients and in 12 of them a so called “moulage symptom” was established. Temporary intususceptions of small into small intestine without intes-
tinal block were found in 2 patients (fig. 4). The duration of the passage was between 3 and 5 hours.

The only patient with MS and lymphosarcoma of intestines shew X-ray picture very similar to coeliac disease, but the mucous relief was quite rough (not smooth) and knotty destructions untypical for the coeliac disease. The dilatation was not so well expressed (fig. 5). Similar differentiative-diagnostical difficulties were reported by other authors too (Sleisenger et al., 1953).

The children with MS and lambliasis had pathological changes located mainly in duodenum and proximal parts of jejunum where the mucous wrinkles were thicker and unproperly ordered. Spasmic waves and quicker transport of the contrast substance through the inflammed intestinal parts were registered. Hypersecretion and floculation was detected in only two children. Patients with lambliasis combined with MS reported also some other investigators (Hoskins et al., 1967; Yardley and Bayless, 1967). No intestinal disorders besides quicker passage in the gastroesophageal tract of patients with MS were registered after surgical treatment. Four patients with a pancreatic insufficiency and two with choledochial obstruction and biliac-pleural fistules caused MS were treated surgically and no pathological changes in their intestines were registered after that.

The patients with a regional enteritis shew stenosis of the terminal ileum and one of them even had together with it an affected ileocecal part of the colon. The pathological changes of the two patients with ileocecal TBC were
very similar for those with regional enteritis, but the present nodular defects and TBC-changes in other organs allowed their differentiation.

An innate stenosis of the distal part of duodenum and proximal dilatation was found in a child, aged 16 months, with MS. The reason for that is a possible bacterial supereffect on the structure (Kin et al., 1966).

The patient with mesenterial vessel insufficiency due to the visceral obliterating thrombangiitis shew a normal passage. The arteriography detected obliteration of the mesenterial arteries and A. gastroduodenalis.

The passage of the studied 52 patients was undoutfully important for the diagnostic investigation of 37 of them (71%). The other 14 patients required passage-examination too, although it was not so important (27%). The only patient (2%) with mesenterial vessel insufficiency shew that the X-ray investigation was not so important for the final diagnosis because it was not the passage-examination which proved the proper diagnosis but was the arteriography.

REFERENCES