Dysphagia resolved with vitamin B₁₂ therapy:
a case of esophageal parakeratosis

A 50-year-old woman presented with
dysphagia since 1 week. She did not drink
alcohol and there was no history of sys-
temic disease, including dermatologic,
immunologic, or genetic disease. The ini-
tial laboratory findings, complete blood
count, and serum biochemistries were
normal, except the serum vitamin B₁₂
level, which was 52 pg/mL (normal range:
126 – 505 pg/mL). Upper endoscopy re-
vailed pangastritis with whitish strips
and pseudomembranes on the esophageal
mucosa, which peeled off similarly to
eosinophilic esophagitis or a lesion of
dermatologic origin (Fig. 1).

The lesions, which presented as discrete
patches starting in the upper esophagus,
extended diffusely through the entire
esophagus. While the gastric biopsy sam-
dles showed features of atrophic gastritis,
the esophageal biopsy samples were
interpreted as parakeratosis (Fig. 2).

Serum antiparietal antibodies were also
positive. The patient was diagnosed as
having early-stage pernicious anemia and
replacement of the specific deficiency
(Fig. 1).

The control biopsy samples showed only
minimal parakeratosis despite the short-
term therapy (Fig. 4).

Diffuse esophageal parakeratosis is a rare
endoscopic diagnosis and is associated
with conditions such as tylosis, mucosal
hyperkeratosis syndrome, pachyonychia
congenita, ethanol exposure, duodenal re-
flux, riboflavin deficiency, and zinc defi-
ciency [1 – 6]. Following this first report
of pernicious anaemia due to vitamin B₁₂
deficiency leading to esophageal paraker-
atosis, we recommend adding it to the
long list of etiologic factors of this condi-
tion. Our patient presented with the sole
symptom of dysphagia, that is without
the established findings of pernicious
anaemia, such as low hemoglobin, other
cytopenias, neurologic findings, and
hemolysis. Like the majority of reported
cases of esophageal parakeratosis due to
nutritional deficiencies, our patient’s
symptoms and signs also resolved after
replacement of the specific deficiency [7].

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