SUMMARY

Biopsies of the mucosa of the small intestine of 22 patients were subjected to light and electron microscopic studies. The patients were grouped into 'controls', coeliac disease, and idiopathic steatorrhoea, and in the last two groups the clinical condition and therapeutic progress was recorded. Electron microscopic studies were directed mainly towards the microvilli of the surface epithelium. It was found that the latter were decreased in height in coeliac disease and idiopathic steatorrhoea and showed greater irregularity in shape and spacing. A good correlation existed between the light microscope appearances of villous atrophy and decrease in surface cell height and the electron microscope findings of microvillous abnormalities.

Our thanks are due to the many physicians who kindly referred their patients to us for investigation, to Dr. R. A. B. Drury and Mr. J. E. Mayhew for the histology, and Mrs. S. Roberts for preparing the electron microscopy sections.

One of us (M.S.) is working with a grant from the Medical Research Council to which grateful acknowledgements are herewith made.

REFERENCES

- Anderson, C. M. (1960). Histological changes in the duodenal mucosa in coeliac disease. Arch. Dis. Childh., 35, 419
- Brettauer, J., and Steinach, S. (1857). Untersuchungen über das Cylinderapithelium der Darmzotten und seine Beziehung zur fettresorption, S.-B. Akad, Wiss, Wien, math.-nat, Kl., 23, 303.
- Doniach, I., and Shiner, M. (1957). Duodenal and jejunal biopsies II. Histology. Gastroenterology, 33, 71.
- Glauert, A. M., Rogers, G. E., and Glauert, R. H. (1956). A new embedding medium for electron microscopy. Nature (Lond.), 178, 803.
- Granger, B., and Baker, R. F. (1949). Electron microscope investigation of the striated border of intestinal epithelium. Anat. Rec., 103.459
- Hartman, R. S., Butterworth, C. E., Hartman, R. E., Crosby, W. H., and Shirai, A. (1960). An electron microscope investigation of the jejunal epithelium in sprue. Gastroenterology, 38, 506.
- Palade, G. E. (1952). A study of fixation for electron microscopy. I. exp. Med., 95, 285.
- Palay, S. L., and Karlin, L. J. (1959). An electron microscopic study of the intestinal villus. I. The Fasting animal. J. biophys. biochem. Cvtol., 5, 363.
- Rubin, C. E., Brandborg, L. L., Phelps, P., Taylor, H. C. Jr., Murray, C.V., Stemler, R., Howrie, C., and Volwiler, W. (1960). Studies in coeliac disease II. Gastroenterology, 38, 517.
- Shiner, M. (1956). Duodenal biopsy. Lancet, 1, 17 and 85.
- (1960a). Coeliac disease. Gut, 1, 48.
- (1960b). Histopathology in Coeliac Disease. Proceedings of the International Congress of Gastroenterology, Leyden, Holland, April 20-24. In the press. and Doniach, I. (1960). Histopathological studies in steatorrhea.
- Gastroenterology, 38, 419.
- Zetterquist, H. (1956). The Ultrastructural Organisation of the Columnar Absorbing Cells of the Mouse Jejunum. Thesis from the Department of Anatomy, Karolinska Institute, Stockholm, Sweden.
 - and Hendrix, T. R. (1960). Bull. Johns Hopk. Hosp., 106, 240.

CORRECTION

In Table I of the paper entitled 'A clinical appraisal of the treatment of chronic duodenal ulcer by vagotomy and gastric drainage operation' by W. Gerald Austen and Harold C. Edwards on page 158 of the June issues, the word 'pyloroplasty' has been incorrectly repeated. The relevant line of Table I should read:-

Type of operation performed	with	vagotomy
Gastroenterostomy		90
Pyloroplasty		10