

segment removal than ileal segment without affecting growth and development.

4. In resections of the ileum, removal of 19 to 42 cm. will produce disturbance of diarrhea and slow weight gain, but adjustment usually takes place in three to four months.

5. In this group of 14 patients in the newborn period with acute obstructive lesions of the jejunum and ileum, five had perforation of the intestine and three survived. Of these five, three were prematures and two survived.

6. Perforated lesions are very prone to produce adhesions and obstruction in the postoperative period, and are important factors in the morbidity and mortality of this particular group of patients.

7. The nine surviving infants have been followed from three and a half months to six years, and are showing satisfactory growth and development.

8. From this study the segment of small

intestine which can be removed with survival and no apparent ill effects is 42 cm. of ileum and 89 cm. of jejunum.

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DISCUSSION.—DR. GROVER PENBERTHY, Detroit, Michigan: These two papers represent a contribution to pediatric surgery, and anyone with experience as regards anastomosis of the intestine realizes the technical difficulties encountered in trying to develop a successful anastomosis in these infants, where there is a discrepancy between the greatly distended proximal segment and a small and often-times underdeveloped distal segment.

The successful ileo-atresias up to 1950 numbered 20, as reported by Snyder and Chaffin, which illustrates no doubt the difficulties encountered in accomplishing a successful result in this type of lesion.

In Dr. Benson's presentation it is interesting to note that of the 14 cases of obstruction ten were due to atresia of the jejunum or ileum. Eight of the ten atresias survived and were discharged from the hospital. The follow-up study shows that one, a mongoloid, subsequently died suddenly at home of causes unknown.

It is also interesting to note that in this series of 14 cases five had perforation and peritonitis at the time of surgical intervention. Three of the five survived. This survival rate reflects not only the

technical management, which includes the delicate handling of the bowel to prevent injury to the serosal covering, but also the availability of improved anesthesia, chemotherapy, and the use of blood and fluids as indicated in the pre- and post-operative periods in these critically ill newborn infants.

DR. FRANK L. MELENEY, New York, N. Y.: Neither of the last two essayists has mentioned the factor of infection in the success or failure of these cases. I am glad Dr. Penberthy mentioned, incidentally, chemotherapy and antibiotics. I would like to ask the essayists what they think the advent of the antibiotics has been as a factor in improving the favorable results in these cases.

DR. CLIFFORD D. BENSON, Detroit, Michigan: I would like to thank Dr. Penberthy and Dr. Meloney for their discussion.

There is no doubt that chemotherapy certainly has been a great aid in these patients. In spite of chemotherapy, however, we still have the difficulty of postoperative adhesions, and this has been one of the main factors in morbidity and mortality.