

Lack of Efficacy of Short Term Thyroid Hormone Therapy in Down Syndrome

It has been frequently observed that a large number of Down Syndrome children and others with mental retardation with no clinical or laboratory evidence of hypothyroidism have been recommended thyroid hormone therapy as a non-specific central nervous system stimulant drug by several eminent pediatricians of the country but without any significant benefit.

With references to the above I would like to quote a recent study done on 44 subjects of Down Syndrome by Tirosh *et al.* which has concluded that close monitoring of thyroid functions in subjects with Down Syndrome is essential and the risk of hypothyroidism appears to be higher as these individuals grow older, probably secondary to thyroiditis(1). A double blind cross over drug placebo trial *failed to document any significant short-term developmental, functional or medical gains attributable to the 8 to 14 weeks thyroxine treatment period* in subjects with low normal thyroid function, as compared to an untreated matched control group. Hence the common practice of short term thyroid hormone supplementation in mentally retarded children without any evidence of hypothyroidism should be

discontinued, although previous studies by Harrell *et al.* found a beneficial effect(2).

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Gastric Perforations in Newborns

Neonatal gastric perforation is a rare and potentially fatal complication. We present our experience with three cases of gastric perforation (*Table I*) and emphasize the danger of using feeding tubes either for lavage or decompression, especially in stressed newborns who have gastric distention, with or without a distal obstruction.

TABLE I—Clinical Profile of Cases

S. No.	Weight and gestation	*Age at presentation (days)	Indications for feeding tube	Size and site of perforation	Management and outcome
1	2.3 kg FTND	7	Bilious vomiting, abdominal distension, for drainage	2 mm in anterior wall of body of stomach	Perforation converted into gastrostomy, uneventful recovery
2	2.5 kg FTND	7	Hematemesis on 2nd day of life, abdominal distention, bilious vomiting, for lavage	3 mm on the anterior wall of stomach	Perforation converted into gastrostomy + Ladd's procedure for malrotation, uneventful recovery
3	FTND	3	Coffee ground vomiting since 2nd day of life, for lavage	2 mm on anterior wall of body of stomach	Closure of perforation, died of septicemia, 2nd day postoperative

*All 3 cases were first seen and managed in peripheral hospitals and referred as 'Septicemia'.
FTND—Full term normal delivery.

The common causes of perforation in the gastro duodenal area cited in the literature, include congenital muscle defects, peptic ulceration, distal obstruction, endoscopy, resuscitation, catheter trauma and idiopathic causes(1).

In one particular review(2), catheter trauma accounted for 11 out of 144 cases of gastric perforation. In our experience there appears to be a combination of factors causing this perforation. All three cases developed gastric distension either due to stress or distal obstruction as in the case with malrotation. Attempts to lavage and/or decompress the distended stomach using nasogastric tube had apparently caused these perforations. These perforations being small (less than 3 mm) and having a clean edge indicate that they are not due to the other causes such as congenital muscle weakness or ischemic necrosis of the stomach wall, where the perforation tends to be

large and ragged. Prompt recognition and early treatment would be very gratifying in these cases and we emphasize that great caution should be exercised when using infant feeding tubes for lavage or decompression in the newborn period.

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