

# Esophageal Variceal Bleeding Therapy in Children

The Case for **PROACTIVE**  
**Rebuttal**

OK, so maybe children are not small adults



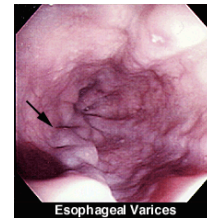
## Do you use ABX in patients with variceal bleeding?

- The data clearly show that administration of ABX to patients with variceal bleeding decreases mortality.
- No studies have been done in children
- Sometimes we have to extrapolate from adult data!



## Do pediatric gastroenterologists perform surveillance for varices in cirrhotic patients?

- 63% say yes
  - Endoscopy – 77%
  - Ultrasound – 23%
- Repeat endoscopy?
  - 12 months: 53%
  - 24 months: 33%



Gana et al. JPGN 2011;52:751

## Do pediatric gastroenterologists provide primary prophylaxis for EV?

- 58% say yes
  - EVL: 56%
  - B-blocker: 37%
  - Sclerotherapy: 7%



Gana et al. JPGN 2011;52:751

## Effectiveness of beta blockers in primary prophylaxis of variceal bleeding in children with portal hypertension

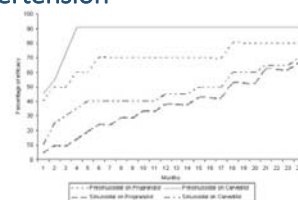


Figure 1: Showing the effectiveness of the drugs (in percentages) with respect to the scheduled visits in the 4 groups

Samanta T et al. Trop Gastroenterol 2011;32:299

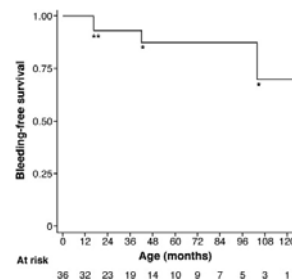
## Endoscopic ligation of esophageal varices for prophylaxis of first bleeding in children and adolescents

- 31 subjects, 4-17 years of age ( $9.5 \pm 4.4$ )
- Mixed group: cirrhosis and PVT
- Grade II or more varices at BL, enlargement by at least 1 grade after 6 months of non-intervention
- Eradication achieved in 28 children (90.3%) after 2 EVL sessions at 3 month intervals
- No bleeding
- Recurrence of varices in 3 children after 12, 13 and 28 months

Celińska-Cedro et al. J Pediatr Surg 2003;38:1008

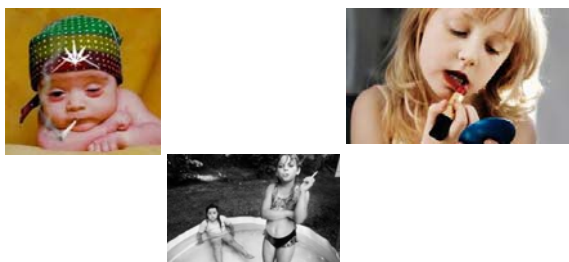
## Bleeding-free survival in 36 children with biliary atresia and major endoscopic signs of portal hypertension who underwent primary prophylaxis

- 36 children (mean age 22 months) with either grade 3 EV or grade 2 EV with red wale markings and/or GV
- Mean # sessions to eradicate = 4.2
- Varices reappeared in 37%
- 97% 3-year survival

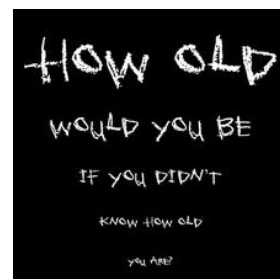


Duché M et al. Gastroenterology 2013;145:801

## Maybe we can't treat kids like adults....



## But kids are people (really, they are)



And sometimes, the lines are blurred...



## Summary

- Children with portal hypertension develop GE varices, and variceal hemorrhage
- Mortality from variceal hemorrhage is probably less in children than in adults (but it is not zero!)
- Risk factors for varices and variceal hemorrhage in children have not been clearly defined
- Primary prophylaxis is effective against first variceal hemorrhage in adults
- There are insufficient data in children to clearly demonstrate efficacy of primary prophylaxis
- There are insufficient data to clearly demonstrate adverse effects of primary prophylaxis in children