Background and aims To determine whether stratification of complexity methods in congenital heart surgery (RACHS-1, Aristotle and STS-EACTS) fit to our centre and determine the best method in discriminating hospital mortality.

Methods Surgical procedures in patients under 18 age were allocated to the categories proposed by the three methods currently available. The outcome in-hospital mortality was calculated for each category. Statistical analysis using the chi-square Pearson test was performed to verify whether the categories presented different mortalities. The categories’ discriminative ability of each method was determined by calculating the area under the ROC curve and a comparison between the curves was performed.

Results 360 patients were allocated by the 3 methods. There was a statistically significant difference between the mortality categories: RACHS - (1) 1.3%; (2) 11.4%; (3) 27.3%; (4) 50%; (p < 0.001), Aristotle (1) 1.1%; (2) 12.2%; (3) 34%; (4) 64.7%, (p < 0.001) and STS - EACTS (1) 5.5%, (2) 13.6%, (3) 18.7%, (4) 35.8%, (p < 0.001). The three methods had similar accuracy by calculating the area under the ROC curve (RACHS - 1 - 0.738; STAT - 0.739; Aristotle - 0.766).

Conclusion The three methods of stratification of complexity currently available in the literature are useful with different mortalities among the proposed categories and similar discriminatory capacity for in-hospital mortality in our centre.

### PS-029

**THE EFFECT OF CONGENITAL CYANOTIC AND ACYANOTIC HEART DISEASE (CHD) ON INTRARUTERINE GROWTH**

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10.1136/archdischild-2014-307384.324

**Introduction**

The heart-placental axis utilises many common molecules and genes and reflects intimate and synergistic growth of both organs. Abnormal cardiac development leading to CHD can be associated with abnormal placentation and abnormal transfer of nutrients and oxygen.

**Objectives**

We measured the anthropometric parameters (length, weight and head circumference) and the placental weight of 49 FT newborns (gestation period > 36 weeks) infants with CHD ((cyanotic (n = 8) and acyanotic (n = 41)) diagnosed clinically and by echocardiography and compared these data with those for randomly selected normal FT newborns (n = 104).

**Results**

Newborn infants with CHD were significantly shorter and had lower birth weight and smaller head size compared to normal newborns. Their placental weights were significantly decreased compared to those for normal newborns. However, there was no statistically significant difference in the anthropometric parameters of infants with cyanotic versus acyanotic heart disease.

**Discussion**

The intrarutelenre growth restriction in newborn infants with CHD may represent an adaptive mechanism to cope with the compromised perfusion caused by the congenital cardiac anomaly. However, this restricted growth can pose a risk for postnatal development in these infants.

**Conclusion**

In this study CHD was associated with significant affection of birth weight, length and head circumference and lower placental weight compared to normal newborns.