is recommended. ABPM should be performed in all children with ARPKD, in children with ADPKD and increased renal volume or high number of renal cysts and in children with unilateral MCDK who show signs of contralateral kidney damage. Children with ARPKD usually require multiple antihypertensive drugs for sufficient BP control. Czech National Registry of children with cystic kidney diseases has been established since 1993 and nowadays 206 children with various types of cystic kidney diseases are registered.

This project has been supported by grant IGA NE/6295-3.

Key Words: ambulatory blood pressure monitoring, children, cystic kidney diseases

**P-621**

**EVALUATION OF THE SAFETY OF SHORT ACTING NIFEDIPINE IN CHILDREN WITH HYPERTENSION**

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The purpose of this study is to investigate the effect on blood pressure (BP) and the incidence of adverse events associated with short acting nifedipine in children.

We conducted a retrospective chart review of pediatric patients who received nifedipine between December 1994 and June 1998. We recorded the dose administered, all BP measurements up to six hours after the dose, and all adverse events.

1,746 doses of nifedipine in 166 pediatric patients were reviewed. Systolic BP decreased by a mean of 17%, and a maximum of 63%. Diastolic BP decreased by a mean of 28%, and a maximum of 89%. Adverse events included: a) change in neurologic status, six cases; b) symptomatic hypotension, two cases; c) oxygen desaturation, 16 cases. Neurologic events occurred in two of six (33%) patients with acute central nervous system (CNS) injury, and in only six of the entire 166 (3.6%) patients in the study. There was a significant correlation, but extremely low R value between nifedipine dose and % change in BP. Although short acting nifedipine can cause profound and unpredictable changes in blood pressure, it is rarely associated with adverse events in children. Short acting nifedipine is an important and effective oral antihypertensive agent which can be safely used for the treatment of hypertensive emergencies in children. We recommend that short acting nifedipine should always be used with caution, and should be avoided in children with acute CNS injury.

Key Words: nifedipine, pediatric, adverse effects

**P-622**

**NONDIPPER PROFILE IN REPAIRED AORTIC COARCTATION**

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Background: A nondipper or otherwise extreme dipper profile is of great importance in arterial hypertension evaluation, because this can help in risk stratification and eventual therapeutic options.

Coarctation of the Aorta (CoA) is a recognized secondary cause of arterial hypertension with surgical treatment. Despite blood pressure (BP) reduction and apparent normalization after surgical repair, some cardiovascular risk markers were previously identified in these patients and a particular clinical follow-up is mandatory in order to avoid cardiovascular events. Our aim was to evaluate nocturnal decline (Nd) both in systolic (S) and diastolic (D) BP of successfully CoA operated adolescents to achieve a better clinical profile definition of our patients.

Material and methods: Ambulatory 24 hours blood pressure monitoring was carried out in 46 adolescents operated on for CoA and presenting with equal or lower 95th percentile blood pressure level for sex and age. The percent Nd was estimated both for S and D blood pressure. A control group of 29 age matched normotensive adolescents (N) were submitted to the same protocol and identical Nd calculation.

Results: Relevant abnormalities were identified between the two groups with significant Nd both for S and D blood pressure (Table).

Conclusions: The less Nd in repaired CoA patients is identical to the nondipper profile often seen in other situations namely in severe forms of essential arterial hypertension. The meaningful of such abnormalities and its clinical relevance is still to be determined. However these results emphasises the needs for close follow-up of this young population.

<table>
<thead>
<tr>
<th></th>
<th>CoA</th>
<th>N</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nd S (%)</td>
<td>8.4 ± 6</td>
<td>11.6 ± 4</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Nd D (%)</td>
<td>15.1 ± 10</td>
<td>20.4 ± 5</td>
<td>&lt;0.02</td>
</tr>
</tbody>
</table>

Key Words: Coarctation, Nondipper, Adolescents

**P-623**

**BIRTH WEIGHT MODIFIES PULSE PRESSURE IN CHILDREN AND ADOLESCENTS**

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The objective was to study the impact of birth weight (BW) on ambulatory pulse pressure (PP), an indirect estimate of aortic compliance. Three hundred and twenty subjects (192 girls) with a BW ranging from 2 to 4.8 kg were included. Ambulatory BP was assessed (Spacelabs 90217) during a 24-hour period at 10 to 18 years of age. In a multiple regression model current weight (p<0.001) and BW (p<0.03) were independent determinants of 24-hour PP. The averages of 24-hour PP, SBP and DBP, adjusted by sex, current age, and height, were calculated for tertiles of current weight. The figure shows that children in the lowest BW tertile (BW <3.1 kg; open symbols) had higher PP (lower part of graph) and SBP values (upper part of graph) than those in the highest tertile (BW >3.5 kg; closed symbols). The different trend in PP and the SBP values may reflect an early impairment in aortic compliance which can contribute to hypertension later in life.

Key Words: birth weight, pulse pressure