

**Background:** White-coat hypertension (WCHT) is a persistently increased blood pressure in the medical office compared with home (or better) 24-h ambulatory blood pressure monitoring (ABPM). Studies in the West have demonstrated that 31–32% of patients with established hypertension experience WCHT. To date, no similar studies have been carried out in this region.

**Objectives:** The primary objective of this study was to explore the prevalence of WCHT in Saudi patients with established hypertension, attending a nurse-led clinic at King Abdulaziz Medical City (KAMC).

**Methods:** This retrospective, descriptive study included 50 patients with hypertension attending a nurse-led clinic in KAMC, from January to October, 2011. Patients had, at minimum, 2 clinic blood pressure readings of 140/90 mmHg or higher and ABPM. Analysis was performed using SPSS Advanced Statistics for Windows, version 18.

**Results:** Of the total population ( $n = 50$ ), 60% were male, mean age was  $61.4 \pm 12.6$  WCHT was found in 48% of patients; 66.6% males. There were no significant clinical differences between the 2 groups as both had equal distribution of co-morbidities

**Conclusion:** There is a high prevalence of WCHT in patients with established hypertension, followed up in a nurse led clinic with a higher prevalence in males. These figures are significantly higher than Western data.

**Recommendations:** All patients with established hypertension should have at least one ABPM in order to guide the clinician in diagnosis and appropriate management.

<http://dx.doi:10.1016/j.jsha.2012.06.227>

### Brain preservation with selective cerebral perfusion, moderate hypothermia and low flow rate Imad Naja, Hani Najm

**Background:** Hypothermic circulatory arrest (HCA) is employed for aortic arch and other complex operations, often with selective cerebral perfusion (SCP). Our previous work has demonstrated real-time evidence of improved brain protection using SCP at 18 °C. The purpose of this study was to evaluate the utility of SCP at warmer temperatures (25 °C) and its impact on operating times.

**Methods:** From 2000 to 2010, 116 patients diagnosed IAA, 40 IAA with VSD, 31 single ventricle, 19 Coa with VSD, 17 DORV, 6 TGA and 3 CAVD underwent total repair using SCP 25–23 hypothermia with low flow rate for 20–35 min. Circulatory arrest (CA), cross clamp (Cx), CPB and post-op complications are retrospectively analyzed.

**Results:** The mean age 12–35 days, weight 1.9–4.0. The complexity of the disease was determinant in the CPB and CX time, the lowest temperature was 19 in very selected patients, the average temp. was 23 °C. CA was in

18 (6.4%). 27% delay sterna closure. Wound infection 11% and 8% mortality.

**Conclusion:** Our study supports the conclusion that systemic circulatory arrest with selective cerebral perfusion at 25 °C can be safely performed while providing comparable cerebral and end-organ protection to that of 18 °C with SCP. In addition, the employment of a more tepid temperature allows for significantly shorter operative times, which may clinically translate into improved outcomes for children undergoing surgical repair of complex congenital heart defects.

<http://dx.doi:10.1016/j.jsha.2012.06.228>

### Impact of diabetes on risk factors, mode of presentation and hospital outcome in patients presented with acute coronary syndromes

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**Background:** Type II diabetes is a prominent risk factor for future cardiac events. Its impact on demographic data, mode of presentation and hospital outcome among a group of Saudi patients with ACS was prospectively studied.

**Methods:** We studied 142 consecutive ASC pts. (91 diabetic) admitted to the CCU at NAWAFH. Including UA, NSTEMI and STEMI.

**Results:** Diabetics were older (61 vs 51 y) [ $p < 0.001$ ], with higher BMI (30 vs 28) [ $p < 0.05$ ], hypertension (71% vs 31%) [ $p < 0.001$ ], hyperlipidemia (54% vs 28%) [ $p < 0.001$ ] and history of IHD (58% vs 39%) [ $p < 0.05$ ]. There was no significant difference in mode of presentation between diabetics and non-diabetics, NSTEMI/UA (62% vs 43%) and STEMI (36% vs 47%) [PNS for both] or KILLIP class at admission. EF by 2D-echo was similar in both groups ( $37 \pm 12\%$  vs  $40 \pm 13\%$ ) [PNS]. Pre-admission medications were more frequently prescribed to the diabetics, aspirin (75% vs 57%), clopidogrel (46% vs 24%) [ $p < 0.05$ ] for both. Beta-blockers (56% vs 28%) [ $p = 0.001$ ] and ACEi/ARBs (73% vs 49%) [ $p < 0.001$ ]. Coronary angiography was offered equally to both groups (64% vs 63%), while there was trend for more prevalence of multi-vessel disease (MVD) in diabetics (29% vs 20%) [PNS]. As well as trend for more hospital mortality rate in diabetics (6.6% vs 2%) [PNS].

**Conclusions:** Compared to non-diabetics ACS at NAWAFH, diabetics are older, with more of hypertension, BMI, hyperlipidemia and IHD history. They were more frequently prescribed pre-admission medications. No impact of diabetes on mode of presentation (STEMI vs NSTEMI/UA) was found. Invasive approach is equally offered to both groups, with a trend for more prevalence of MVD and hospital mortality in the diabetic patients.

<http://dx.doi:10.1016/j.jsha.2012.06.229>