Abstract: **P2745**

**Trends in rheumatic heart disease in Egypt (2006-2018): data from the national rheumatic heart prevention and control program**

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Background and Objectives: Rheumatic Heart Disease (RHD) is a serious cardiac condition in children and young adults, although it remains neglected around the world. The problem of RHD is a national issue in Egypt and is being given priority by the Egyptian Ministry of Health under the auspices of all national experts and leaders concerned. The national RHD prevention and control program was established in 2006 through PHC RHD centers distributed allover the country that are linked to tertiary level cardiac centers. The program conforms to the international guidelines for identification and management pharyngitis, Rheumatic fever (RF) and RHD. The program is projected to save 1.7 billion USD; the cost of valve replacement surgeries as required for the number of RHD cases if they are neglected.

Methods: a cross sectional study was conducted in a RHD center over a decade (2006-2018). A total of 17050 individual were enrolled and evaluated. Data collection was done through direct interviewing using a pre-designed questionnaire. John's criteria were used for diagnosing RF. For confirmation of RHD each individual was subjected to ECG and color Doppler echocardiography.

Results: The majority of the screened subjects were in the age group 5-15 years (69.0%), females (63.2%), rural residents (61.2%), had primary education (42.9%), and of low socioeconomic standard (50.0%). Screening of siblings and relatives of RHD case revealed 22.5% RF cases [11.8% and 10.7% cases with RHD and Rheumatic arthritis (RhA) respectively] suggesting hereditary or familial tendency of the disease. The most frequent presenting symptoms were dyspnea on effort (55.1%), tonsillitis or pharyngitis (38.1%), arthritis (15.3%), arthralgia (5.8%), and fever (2.8%). In total, 12.7% case were diagnosed with RHD, 16.6% had RhA, 0.05% had Rheumatic Chorea, and 72.5% were free of any cardiac insult of which 37.7% were misdiagnoses receiving LaP (99.9%). The mitral valve was the most frequently afflicted (95.2% of all valvular affections). About 54% experienced recurrent attacks of tonsillitis of which 60.4% underwent tonsillectomy [OR 95% CI= 243.4 (183.3-323.4), p<0.0001], 62.6% received LaP [OR 95% CI= 1.5 (1.45-1.64), p<0.0001], and 34.8% had eventually developed rheumatic condition mainly RHD (13.4%), RhA (21.3%) and R. Chorea (0.1%). Among those underwent tonsillectomy and received LaP, 12.8% and 14.8% respectively had developed RHD. However, 61.7% of the latter were not compliant with the biweekly regimen of LaP. During follow-up of RHD cases 1.2% had improved, 98.4% were stable and 0.4% were deteriorated.

Conclusion(s): Misdiagnosis of RF is still high. This together with poor compliance with LaP may affect efforts for prevention of disease complications. Updating national guidelines, capacity building, strengthening the quality of LaP, and reliance on appropriate investigation should be emphasized. The presence of hereditary or familial tendency for RF needs to be confirmed.