

**P0083**

**Paper Poster Session**

**Emerging and pre-emerging viruses**

### **Overcoming challenges to develop an effective assistance in an epidemic area of dengue fever**

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**Background:** World Health Organization estimates that 25.000 annual deaths occur due to dengue .In São Paulo, a 12 million inhabitants Brazilian city, we faced an epidemic in 2014 with 257.5 cases per 100,000 inhabitants. The municipal health department (MHD) proposed for 2015 a joint action involving private hospitals for early detection and treatment of cases. We describe healthcare provided by Hospital Alemão Oswaldo Cruz (HAOC).

**Material/methods:** In March 2015, the MHD identified five hot spot areas of dengue and organized tents located in the yards of facilities dedicated to primary care. Private hospitals provided healthcare workers trained to identify patients at risk of Dengue Shock Syndrome (DSS). A first examination was performed by a nurse who verified vital signs and tourniquet test. Patients classified as *at risk* for DSS during screening had the blood tested for platelets and hematocrit. If hemoconcentration was present the patient received hydration and further physical examination with a new blood count. An ambulance was available for patient transportation if hospital assistance was required. We calculated the costs of the project. A satisfaction survey was made among patients.

**Results:** From April 22<sup>nd</sup> to May 22<sup>nd</sup> , 2015 HAOC admitted to the tent 1377 patients (50% were female) who attended 2468 visits, mean of 1.79 visits/patient. Mean age was 34 years old (4 m to 84 yo). The most frequent comorbid conditions were hypertension (13.7%) and diabetes (7.2%). Fifty-five patients (3.9%) related a previous diagnosis of dengue. Among those with a history of yellow fever immunization, 29 out 203 (14.2%) patients presented with bleeding and 149 out 1174 (12.7%) without hemorrhagic manifestation. The most common site of bleeding were nasal mucosa and gum (both 37%), urine (17.2%), vaginal (9.8%) and gastrointestinal tract (7.3%). Tourniquet test was positive in 58 patients (4.7%) out of 1227 tested. Clear hemorrhagic manifestation or poor skin condition were the most common contra-indication for this test. The nadir of platelets count was achieved in the 6<sup>th</sup> day of symptoms (percentile 25 - 88,500/mm<sup>3</sup>). The peak of hematocrit was achieved in the 4<sup>th</sup> day (percentile 75 – 44,7%). We transferred 21(1.5%) patients to a reference hospital. Among the 2468 visits, 913 (36.9%) patients were classified as group A, 1309 (50.03%) B, 246(9.9%) as C. All group C and 331 from group B (25%) received hydration and follow-up at the tent. No deaths occurred. The total cost (excluded the physical structure of the tent) was R\$296.508,00 (US\$ 74.127,00) or R\$120,14 (US\$30,03) per visit. Satisfaction of patients was measured as follows: felt embraced by staff (99%), fast and effective approach (98%), staff cleaned their hands before examination (93%).

**Conclusions:** a relative low cost measure for early identification of potential severe cases of dengue fever probably prevented deaths.