

but second dimensional electrophoresis displayed different spots. Immunoreactive spots after EITB and dominant spots 27–44 kDa, in the 4–5 pH range were trypsin in-gel digested, and molecular weight determination for the spots were carried out. Subsequently followed by peptide mass fingerprinting and MALDI-MS analysis.

**Conclusion:** This identification and preliminary characterization of the native proteins is useful in selecting a novel and specific protein target, which can be a helpful in accurate diagnosis of NCC and can also serve as a vaccine candidate.

<http://dx.doi.org/10.1016/j.ijid.2016.02.821>

#### Type: Poster Presentation

Final Abstract Number: 43.083

Session: Poster Session III

Date: Saturday, March 5, 2016

Time: 12:45–14:15

Room: Hall 3 (Posters & Exhibition)

#### The possible roles of IPT and ITNS in gestational, placental and cord blood malaria parasitemia, pregnancy outcome and fetal weight in Isu, Imo State Nigeria



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**Background:** Pregnant women in varying stages of pregnancy consented to participate in this study aimed at assessing the possible roles of the use of intermittent preventive treatment (IPT), insecticide treated bed nets (ITNs) in addition to the routine prophylactic malaria drug (Paludrine) on gestational, placental, cord blood malaria parasitemia, pregnancy outcome and weight of the new born.

**Methods & Materials:** Ethical considerations and approvals were duly obtained. Pregnant women were placed in 3 groups: Group A had women who were given IPT in addition to the routine Paludrine, Group B had women given ITN in addition to Paludrine while Group C had women who were given both IPT and ITNs in addition to the routine Paludrine. Peripheral malaria parasitemia was determined from Giemsa stained thick and thin blood smears on the first day of this study and on the day of delivery. Placental and cord blood parasitemia were determined from blood taken from the maternal side of the placenta as well as from the cord of the new born babies. Pregnancy outcome was noted for each participant and all the babies born were weighed on delivery.

**Results:** An initial overall 47.4% peripheral malaria parasitemia was observed. Group A women: 25% had peripheral, 54% Placental and 53% cord blood malaria parasitemia respectively with pregnancy outcome as follows; 13% abortions, 8% still births and 79% live births. The baby birth weights were 12.6% low births, and 12.6% above 4kg. Group B women: 21% had peripheral, 34% placental and 38% cord blood parasitemia respectively with pregnancy outcome as follows: 8% abortion, 5% still births and 87% live births. The baby weights were: 7.6% low birth weights, and 26.1% above 4kg. Group C: 2.3% of the women had peripheral parasitemia, 44.2% had placental and cord blood malaria parasitemia respectively with pregnancy outcome as follows: 3.1% still birth and 96.9% live births. Low birth babies were not observed and 36.4% weighed above 4kg.

**Conclusion:** Findings from this study emphasize the need to enforce the use of ITNs and IPT in pregnancy in Nigeria especially ITN usage which is below average.

<http://dx.doi.org/10.1016/j.ijid.2016.02.822>

#### Type: Poster Presentation

Final Abstract Number: 43.084

Session: Poster Session III

Date: Saturday, March 5, 2016

Time: 12:45–14:15

Room: Hall 3 (Posters & Exhibition)

#### The possible role of nutritional status on the pro and anti-inflammatory cytokine balance of children with malaria from Imo State, Nigeria



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**Background:** Understanding the impact of malnutrition on pro and anti-inflammatory cytokine response in Plasmodium falciparum (p.f) infected children is very important for malaria control. This study specifically examined the balance between Interleukin 10, Tumour Necrosis Factor (TNF) and nutritional status of Plasmodium falciparum malaria infected children in South Eastern Nigeria to determine and evaluate the influence of malnutrition on immune response among p.f Infected children in Imo State Nigeria.

**Methods & Materials:** Ethical considerations were duly observed. Children aged 1–72 months with ongoing fever or history of fever within the last 24 hours and with no sign suggestive of severe malaria were involved in this study. Blood films stained with giemsa and rapid diagnostic test (RDT) kit were used to diagnose malaria parasitemia. Their Nutritional status was determined using the international Reference Population defined by the U.S National Center for Health Statistics (NCHS). IL-10 and TNF were assayed by ELISA. Statistical analysis was done using SPSS version 17.

**Results:** A total of 1344 febrile children were involved in this study. From this group 26.3% and 31.5% were positive for malaria parasites microscopically and through the RDT kit respectively. The cytokines were associated significantly with malaria infection. IL-10/TNF ratio was significantly associated with parasite density and age ( $p < 0.05$ ). IL-10/TNF ratio was lower in children 1–24 months when compared with older children. There was however no significant association between the nutritional status of these children and malaria infection. Non significant proportions were stunted (22.9%), Under weight (9.4%) and wasted (5.2%). Stunting, underweight and wasting cut across the study population. These findings show no significant relationship between presence of malaria and stunting, Underweight and wasting, rather stunting and wasting were associated with age ( $p < 0.05$ ). There was no relationship observed between the IL-10 and TNF cytokines levels and the nutritional status of the study population.

**Conclusion:** Findings from this study suggest that there is no association between malnutrition and malaria as well as between the nutritional status of the study population and their cytokine level

<http://dx.doi.org/10.1016/j.ijid.2016.02.823>