



Factors associated with hepatomegaly, portal vein dilatation and periportal fibrosis among the adult population living in a *Schistosoma mansoni* endemic area, north-western Tanzania

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Background: Chronic morbidities related to *S. mansoni* in the adult population have received little attention and are not used as indicators for the need of interventions. Here we report *S. mansoni* related hepatosplenic morbidities among adult population and their associated factors from an endemic foci in North-western Tanzania.

Methods: The ultrasonographical cross-sectional study was conducted in 20 villages of Ukerewe district and a total of 3,630 (≥ 15 years) were examined for presence of *S. mansoni* infection related morbidities using Niamey protocol. Each of the participant submitted a single stool sample for parasitological examination using duplicated Kato Katz thick smear technique. A questionnaire was used to collect demographic data.

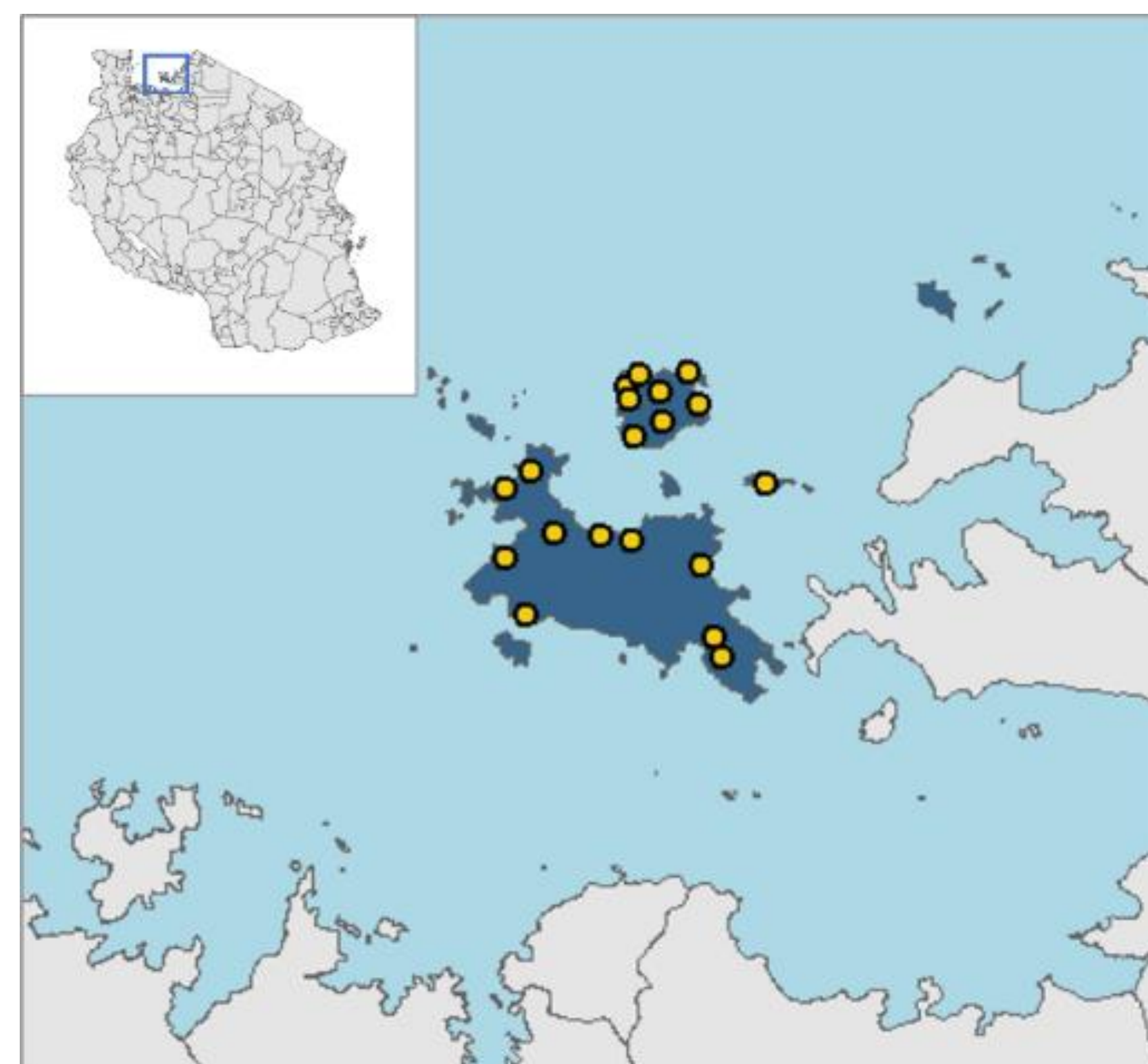


Figure 2: Study villages at Ukerewe island, north-western Tanzania

Results: The prevalence of splenomegaly, periportal fibrosis (PPF), hepatomegaly (enlargement of the left liver lobe) and portal vein dilatation (PVD) were 40.5% (95%CI: 38.8-42.1), 45.6% (1,657/3630), 66.2% (95%CI: 64.6-67.7 and 67.7% (95%CI: 66.2-69.2). Factors associated with hepatomegaly were being female (1.1, 95%CI: 1.0-1.1, $P < 0.001$), age groups (36-45 years, 46-55 years and 56-65 years), history of no PZQ treatment and study villages and liver image pattern. For PVD were being male, age groups (≥ 46 years), Liver Image pattern (C, D, E and F) and study villages. Factors associated with PPF were being male, age groups ≥ 36 years, history of blood vomiting, abdominal distension and living in the study villages.

Conclusion: Hepatosplenic morbidities associated with *S. mansoni* infection are common in this population. It is strongly recommended that this population will be included in the regular treatment.

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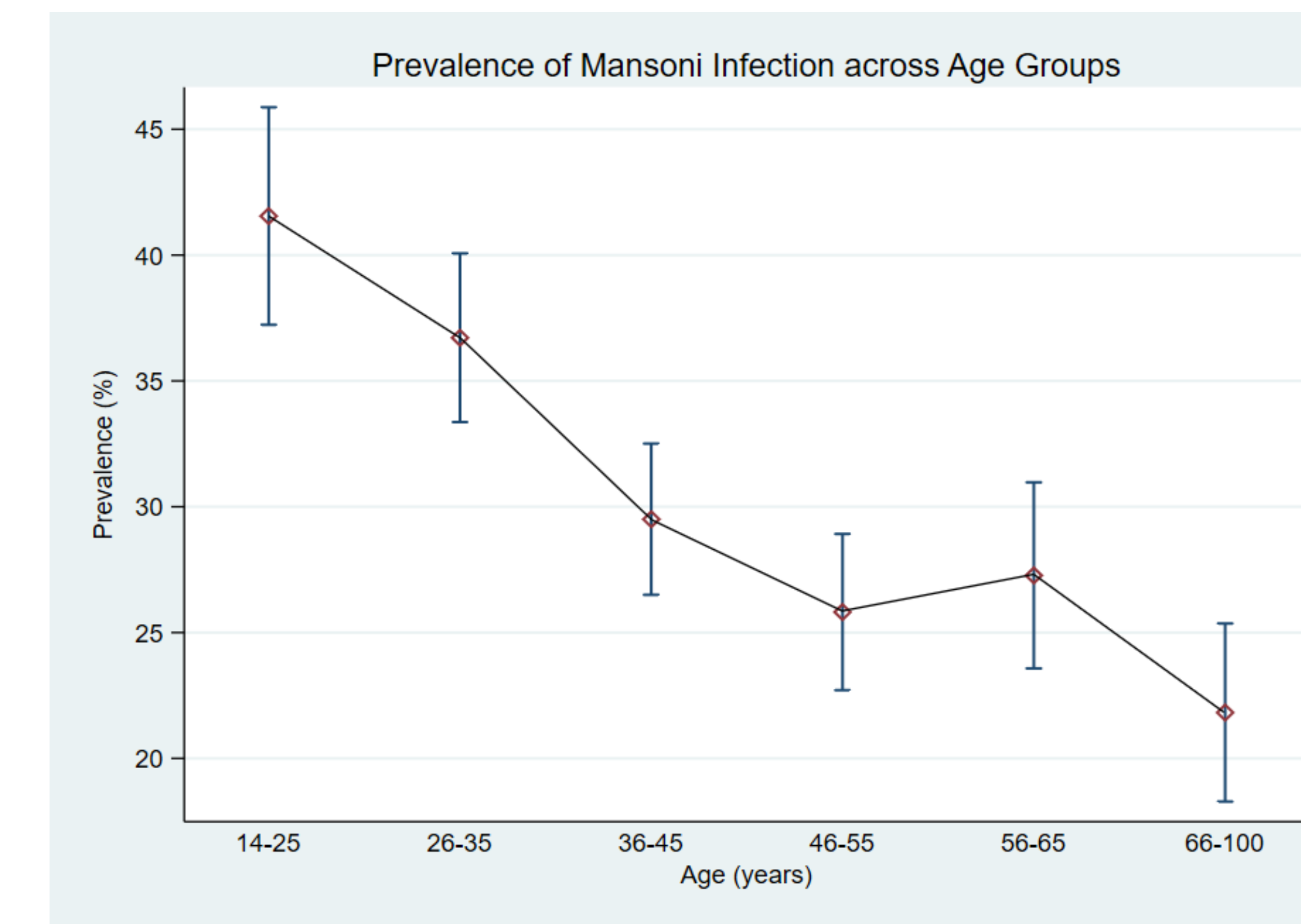


Figure 1 : Prevalence of *S. mansoni* infection categorised by age groups

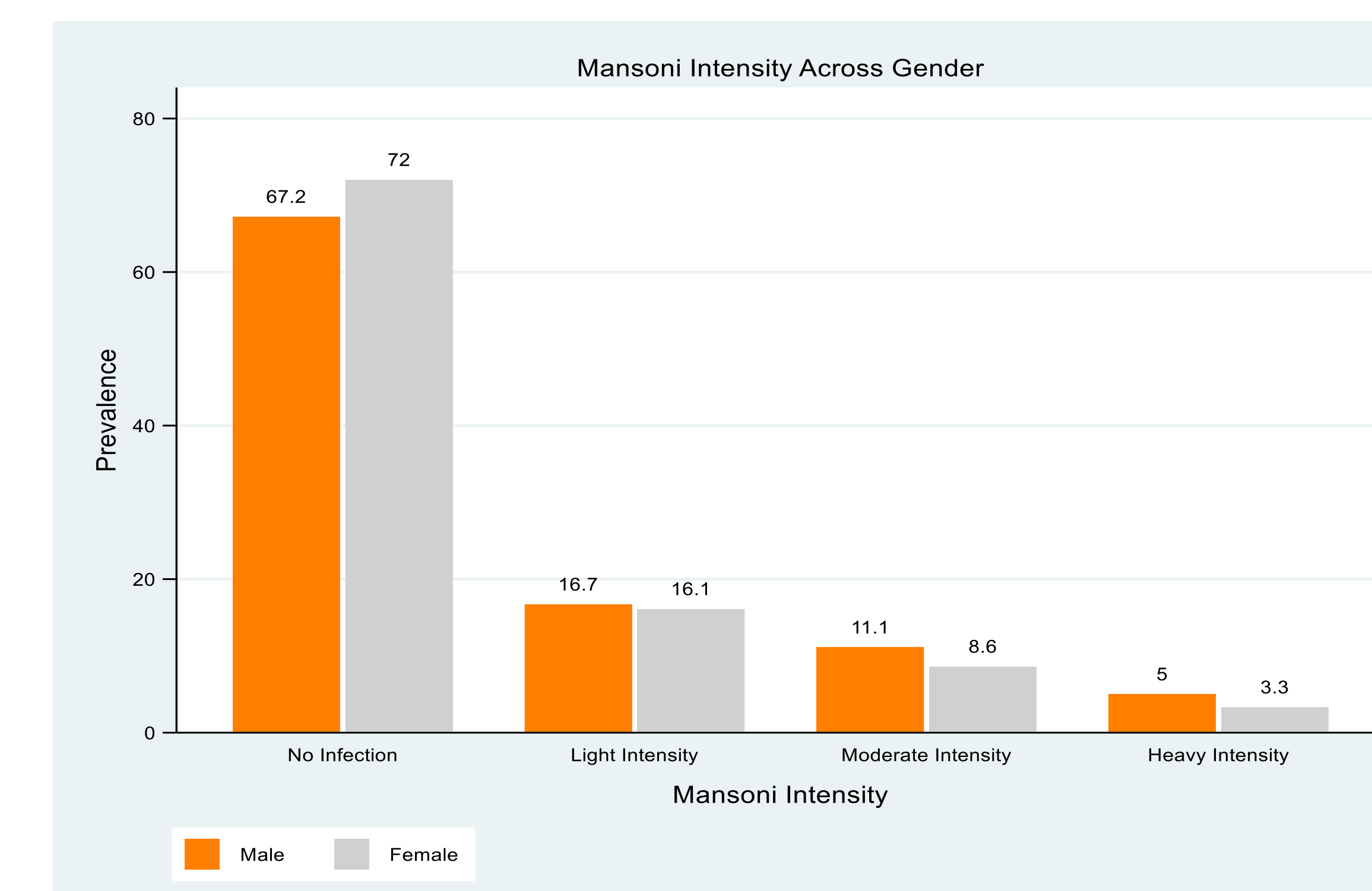


Figure 2 : Intensity of *S. mansoni* infection categorised by sex

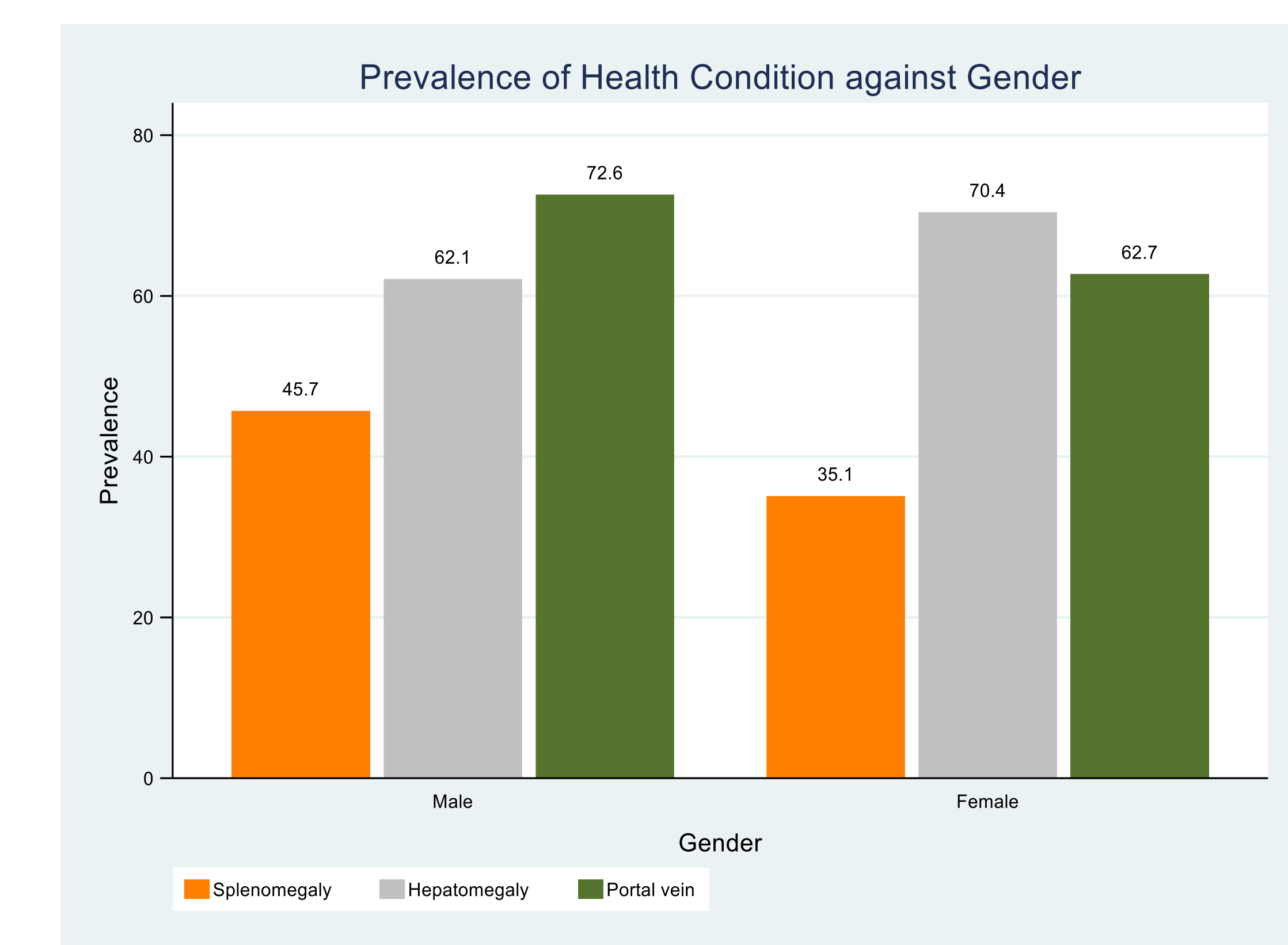


Figure 3: Prevalence of splenomegaly, hepatomegaly and Portal Vein Dilatation categorised by sex

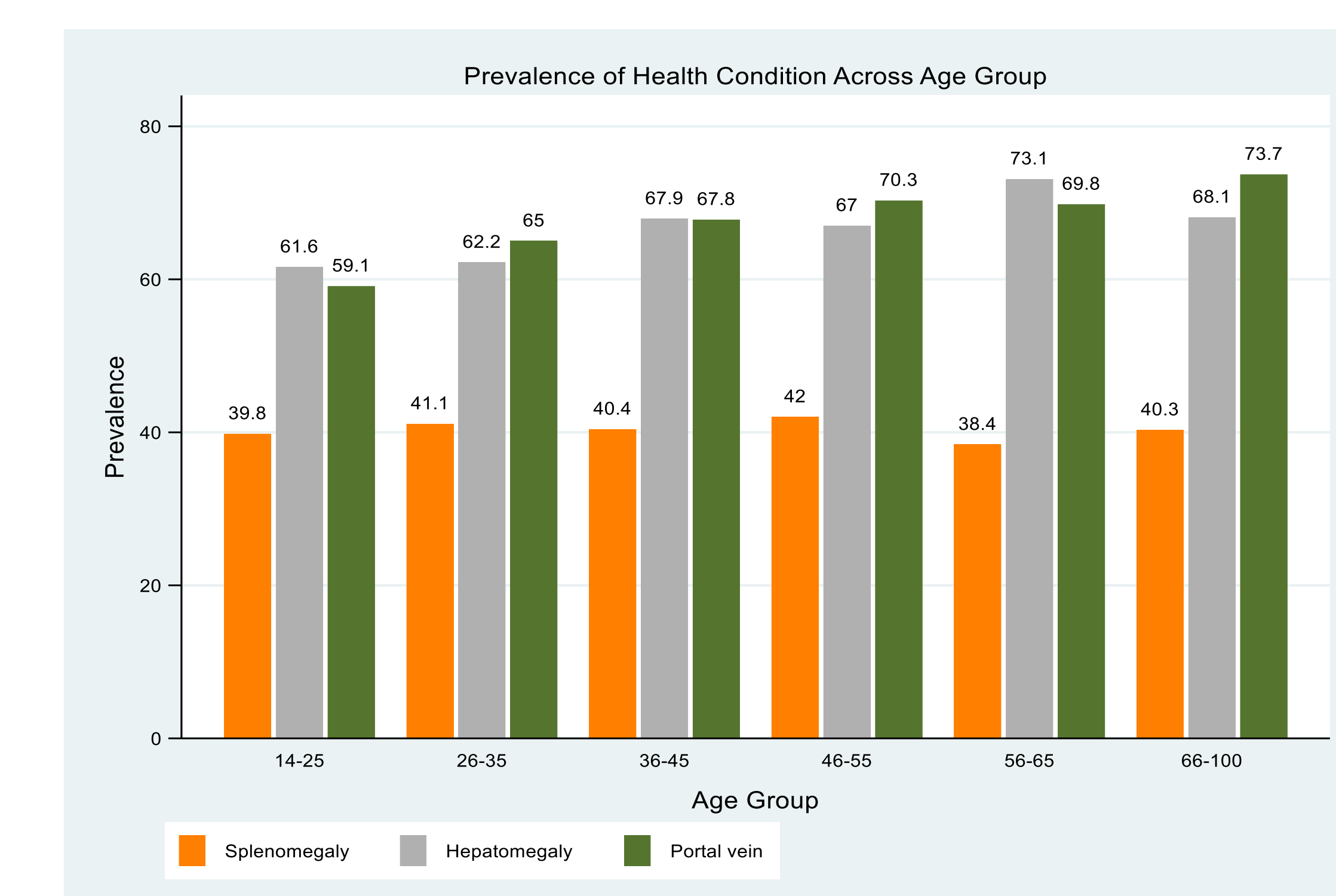


Figure 4: Prevalence of splenomegaly, hepatomegaly and Portal Vein Dilatation categorised by age groups