

عنوان مقاله:

Detection of malaria using blood smear and nested-PCR for suspected patients in south-eastern Iran: A country close to malaria elimination with a high miss diagnosis by light microscopy and RDT

محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

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خلاصه مقاله:

Introduction and objects: malaria is highly endemic in south-east parts of Iran and the prompt assessment of the malaria cases is dependent on the sensitive and specific malaria identification. The aim of our study is to assess the efficacy and agreement of Light microscopy (LM) and Rapid diagnostic test (PfHRP-2/pLDH RDT) against Nested-PCR. Materials and Method: In a cross-sectional study, we assessed all malaria suspects that referred to Razi hospital in Saravan city, Sistan and Baluchestan, Iran. The patients' demographics, microscopy data, RDT, and Nested-PCR results were gathered. The Nested-PCR results were set as reference and the other methods were compared against it. All the results were entered in SPSS version 16 and analyzed. Results: the sensitivity (Sn), specificity (Sp), positive predictive value (PPV), negative predictive value (NPV), and Kc were 55.3%, 100%, 100%, 94.3%, and 0.671 for LM and 55.3%, 99.6%, 95.4%, 94.3%, and 0.602, for RDT, respectively. Sn, Sp, PPV, NPV, and Kc of LM were 55.7%, 100%, 100%, 96.2%, and 0.714 for *p. vivax* and 25%, 100%, 100%, 97.9%, and 0.393 for *plasmodium falciparum*, respectively. Furthermore, the Sn, Sp, PPV, NPV, and Kc of RDT were 57.7%, 99.6%, 93.7%, 96.2%, and 0.695 for *p. vivax* and 25%, 99.6%, 66.7%, 97.9%, and 0.354 for *p. falciparum*. Conclusion: both methods were sensitive, specific, and had good agreement in detecting malaria and specifying *p. vivax* specie; however, their agreement was low in case of *p. falciparum* compared to Nested-PCR

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