INTRODUCTION: Diagnosis of Gilbert's disease often involves unnecessary testing and patient anxiety. Rifampin test can support the diagnosis; it has been described in short series and lacks standardization in dose, collection times, result presentation and interpretation. Our objective was to compare the response to oral rifampin in a series of patients with Gilbert's disease, 2 and 4 h after drug administration.

PATIENTS AND METHODS: Eighty-nine patients with Gilbert's disease (elevated total bilirubin with no hepatopathy or hemolysis) were recruited. After a basal blood collection, 900 mg rifampin were administered per os and new samples were drawn 2 and 4 h later. Total and esterified bilirubin were measured in every sample. Haptoglobin concentration was also analyzed.

RESULTS: When expressed as relative increase with respect to basal values, variations observed 2 h after rifampin intake were all above 15%. A significant correlation ($r = 0.902; p = 0.000$) was found between relative increases 2 and 4 h after drug administration. No significant variations were found in haptoglobin concentrations.

CONCLUSION: Rifampin test is useful in diagnosing Gilbert's disease, but variations in total bilirubin concentrations (basal and post-rifampin) make that no absolute cut-off value can be used. Correlation between 2- and 4-h relative increases suggests that a shortened version could simplify the test.
The last one is the Rifampin test, normally taking 4 h and considered as positive when the total bilirubin after 2 h is doubled or increased by 40% as compared to the basal value. Nevertheless, important to point out that there is no consensus existence about its clinical usefulness. However, several tests based on the bilirubin response to fasting, including nicotinic acid and rifampin tests, have been reported as comparable in the diagnosis of Gilbert's syndrome; it is never the overt hemolysis that is expected, but a pattern of increased bilirubin concentration occurring in the first 2 h, and is less intense afterwards (4 to 6 h).

In the evaluation of the absence of disease, the use of a variety of diagnostic tests has been adopted as a universally accepted procedure for total bilirubin measurement. Characteristics of the 78 included patients are shown in Table I. Unconjugated bilirubin (μmol/l) was 22.23 ± 7.35, whereas total bilirubin (μmol/l) showed 30.78 ± 9.23. GGT (IU/l) was 15.60 ± 8.30, AST (IU/l) was 20.93 ± 4.66, ALP (IU/l) was 176.01 ± 74.13, and LDH (IU/l) was 348.61 ± 107.97. Thus, magnitudes other than the absorbance were calculated as relative increases in total bilirubin concentration at 2 and 4 h with respect to basal values. Relationship between relative increases at 2 and 4 h with individual biological variation was expressed as relative increases in total bilirubin concentration at 2 and 4 h with respect to basal values. The relationship between the measured concentrations for total and conjugated bilirubin was important to investigate a possible hemolytic effect of rifampin during the test. Measurements were performed in an Advia 1650® reagent and calibrators provided by the manufacturer, according to the procedures, and were within the acceptable criteria according to external quality assurance programs.
In our study, all patients with Gilbert's syndrome showed a relative increase in total bilirubin concentration at least 0.15 times their basal values at 2 h, and 0.38 at 4 h. As compared to fasting test. Velilla et al. [12] suggested that rifampin is useless in diagnosing Gilbert's syndrome and made bilirubin measurement 4 h later, assuming no therapeutic effect. These 2 latter are comparable on exclusion rather than on a panel of tests. Many different tests exist that can support the diagnosis, like those based on fasting, phenobarbital, nicotinic acid or rifampin. These 2 latter are comparable on exclusion rather than on a panel of tests. Many different tests exist that can support the diagnosis, like those based on fasting, phenobarbital, nicotinic acid or rifampin. These 2 latter are comparable. Many different tests exist that can support the diagnosis, like those based on fasting, phenobarbital, nicotinic acid or rifampin. These 2 latter are comparable.