

Short Communication

## HEPATITIS C VIRUS SEROTYPES IN CHRONIC LIVER DISEASE

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### ABSTRACT:

**Objective:** To determine the HCV sero-types in patients with chronic liver disease, secondary to chronic hepatitis C in Northern Pakistan.

**Methods:** Patients with clinical features of chronic liver disease, elevated ALT, positive anti - HCV, and HCV RNA positive by PCR underwent HCV sero-type determination.

**Results:** Out of 148 patients there are 95 (64.1%) patients who have HCV sero-type III. The second and third most common categories were untypable & HCV sero-type I. Females outnumbered males.

**Conclusion:** Patients with chronic liver disease due to Hepatitis C virus infection in this part of Pakistan had predominantly HCV sero - type III.

**KEY WORD:** HCV Sero-type, HCV Genotype, Chronic Hepatitis C, Chronic Liver Disease.

### INTRODUCTION

Hepatitis C virus infection (HCV) is a major cause of chronic liver disease in USA<sup>1</sup> and in various other parts of the world including Pakistan<sup>2</sup>. Determination of HCV sero -type is helpful in epidemiological studies as well as in treatment of hepatitis C and in vaccine devel-

opment<sup>3,4,5</sup>. HCV sero-types may vary in various parts of the world<sup>6,7,8,9</sup>. In Pakistan, previous studies have noted that the hepatitis C genotype most commonly isolated was type III.<sup>10,11,12,13</sup>

Determination of genotype can be performed by several methods<sup>3</sup> and some of these involve PCR technique, which can be cumbersome. Recent studies have shown that sero-type determination, which is easier and involves less complexity, is equally useful, as performed with Murex HCV sero- type assay version 1-6.<sup>14</sup>

The aim of this study was to determine the HCV sero-type in patients with chronic hepatitis C infection who presented to us for evaluation in this part of Pakistan.

### PATIENTS AND METHOD

Patients who had clinical features of chronic liver disease with elevated ALT, positive anti HCV and HCV RNA positive by PCR were subjected to HCV sero-type determination. Abbot Murex HCV sero-type assay version 1-6 was used for these studies. The study was conducted at Shifa International Hospital during 2000-2001.

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## RESULTS

Out of 148 patients 95 (64.1 %) were found to have sero-type III. The other common sero-types were untypable or sero-type I (Table-I). Majority of sero-type III patients were distributed from ages 18 to nearly 70. However, most of them were between ages 30 and 60. There were 86 (58.1 %) females and 62 (41.0%) males. Of 95 patients with sero-type III, there were 56 (58.9%) females and 39 (41.1 %) males (Table-II).

## DISCUSSION

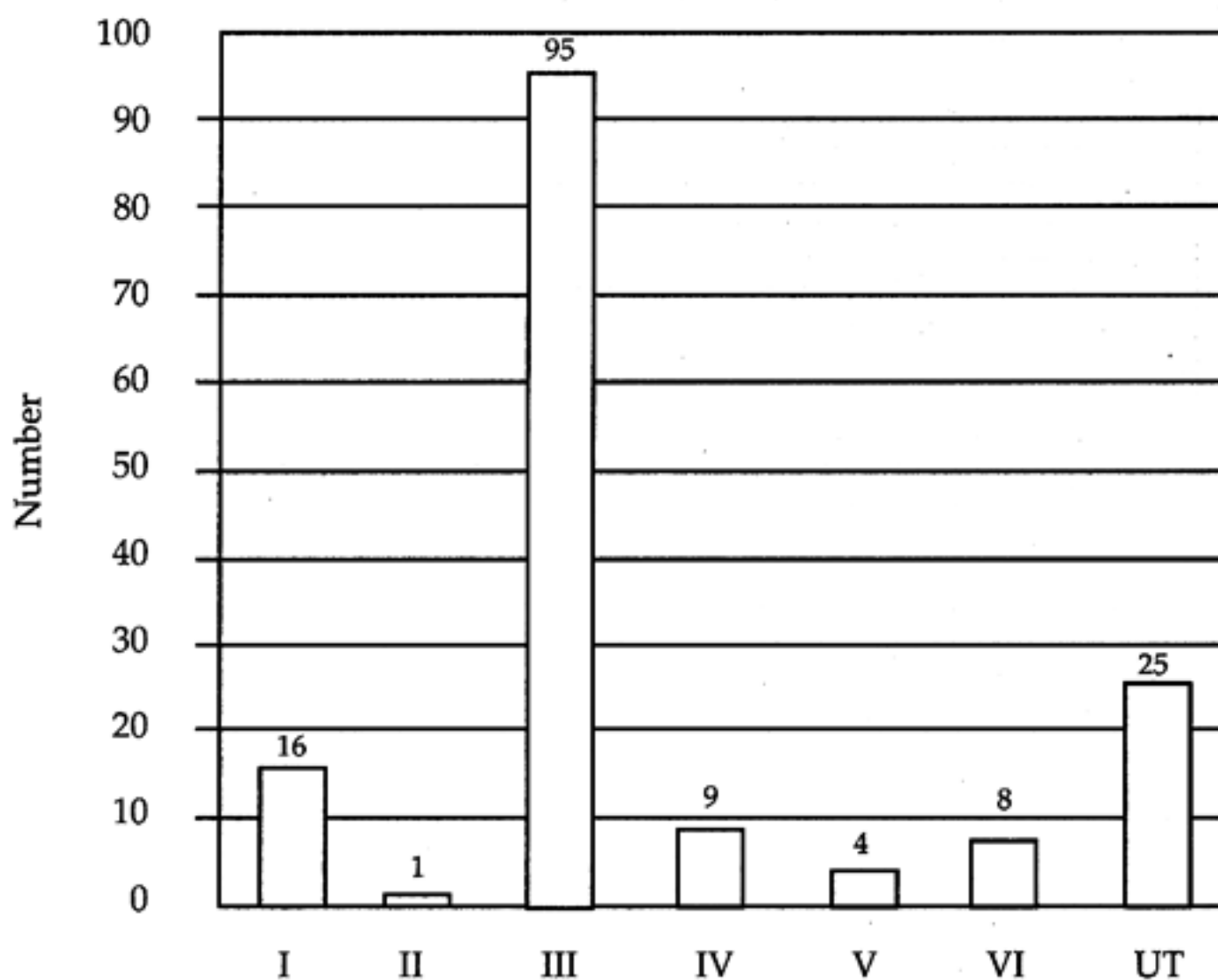
Determination of sero -type in our cases in this part of Pakistan has been about same as shown in the previous studies,<sup>10,11,12,13</sup> HCV sero- type I is difficult to treat<sup>4,5</sup> and most consensus

conferences<sup>15,16</sup> recommend treatment of at least 48 weeks for sero-type I whereas sero-type III had been found to be more responsive to the antiviral therapy. In Pakistan, the presence of sero- type III has presumably been a reason for considerably better response in chronic hepatitis C patients to Interferon and Ribavirin therapy<sup>17</sup>. Although we have most common sero- type III in our areas, it is still advisable that sero -type may be determined to help in the management of these patients.

In conclusion, this study shows that predominant HCV sero-type in our area is sero-type III, although other sero-types are also present. The determination of these sero-types should be encouraged to plan and effectively carry out the anti-viral treatment of chronic Hepatitis C virus infection in chronic liver disease.

Table - I: Distribution of HCV Serotypes

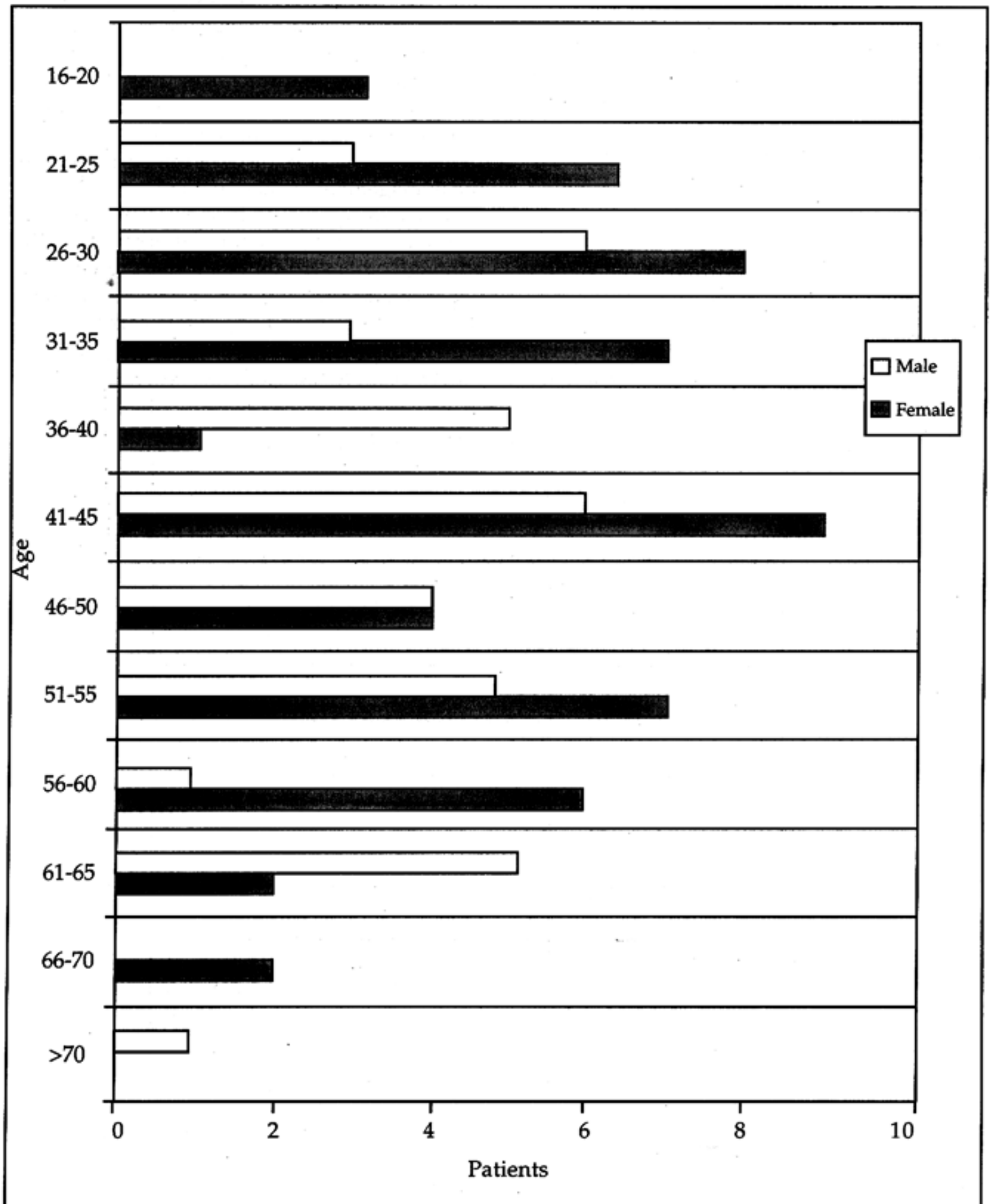
(N = 148) M = 62, F = 86



UT = Untypable

Table - II: Distribution of HCV Srotype III

(N = 95) M = 39, F = 56



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