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AWARENESS OF RIBAVIRIN THERAPY AMONG DENTAL STUDENTS

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Abstract

The aim of this study is to evaluate the abutment teeth selection in fixed partial denture (FPD) done by undergraduate students.For this, patient records of those who underwent replacement of missing teeth with fixed partial denture were collected. A total of 50 patient radiographs were evaluated. The data on the following parameters: gender and age of the patient, crown root ratio, pocket depth, mobility, axial alignment of the abutment tooth, existing caries and periapical lesion or pulpal involvement and alveolar ridge form were collected. The data was tabulated in excel sheet. After data collection descriptive statistical analysis was done in SPSS software. In the current study the most prevalent gender in the study population to undergo FPD treatment were males (66%) than females (34%). The most prevalent age group opting for FPD treatment was between 41-50 years(52%). 38% of the evaluated FPD abutments had a Crown root ratio of 1:1, 40% of the abutments chosen for FPD construction were detected to have caries. Periapical lesion was present in 13% of the abutment teeth evaluated. Axial alignment of the tooth showed mostly normal alignment representing (65%); pulpal involvement and root canal treatment were done in 17% of the evaluated abutments. The alveolar ridge form of the evaluated patients showed flat ridge (58%). The present study shows appropriate parameters that have to be evaluated by undergraduate students during abutment selection for treatment planning of FPD.

Keywords: *; Crownroot ratio; fixed partial denture; Probing depth*

Introduction

Ribavirin is another nucleotide analogue with wide range of antiviral efficacy against multiple viruses, including respiratory syncytial virus, influenza virus , measles, herpes simplex virus, human immunodeficiency virus, Lassa fever , and hepatitis B and C viral infections. Ribavirin can indeed be delivered orally, intravenous infusion or via a nebulizer. It is indeed a guanosine ribonucleotide modulator often used pause viral RNA blend and viral mRNA expression, rendering it a nucleoside inhibitor. Ribavirin is a pro - drug which approximates purine RNA nucleotides when it is used. Throughout this configuration, it interferes with the RNA digestion needed for gene transcription. The suggested viral ribavirin activity systems involve inosine monophosphate dehydrogenase restriction and immunomodulatory consequences, as well as rapid interruption of RNA polymerase hindrance and lethal epigenetic modification.(Crotty et al., 2000; Graci & Cameron, 2006; Parker, 2005)

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Ribavirin is mainly used for the management of hepatitis C and hemorrhagic fever. Ribavirin is perhaps the principal available treatment for a variety of viral hemorrhagic fevers, as well as Lassa fever, Crimean-Congo and Venezuelan hemorrhagic fever, and Hantavirus disease, regardless of the fact that evidence on these infections is scarce and the therapy may be potent at a preliminary phase. Vaporized formulation were previously used to manage respiratory syncytial virus-related illnesses in children. It has been used in the management of rabies.

Experimental research evidence demonstrates that ribavirin could have worthwhile effects on canine distemper and poxviruses. Ribavirin has also been used as a drug for herpes virus. Ribavirin therapy decreased the severity of herpes symptoms and advanced rehabilitation, as contrasted with false therapy. Some interest has been established in its possible use as a cancer chemotherapy treatment, particularly acute myeloid leukemia..(Arumugam & Watanabe, 2017; Paeshuyse et al., 2011; Ventre & Randolph, 2007) .This survey was initiated to study the awareness of ribavirin therapy amongst dental students.

Materials And Method

This was a cross-sectional type research done with questionnaire distributed among 100 dental college students in Chennai. A self-designed questionnaire with 10 items that elicit knowledge and understanding of ribavirin therapy amongst dental college students.Questionnaires were circulated through an online website survey planetThe questions explored the awareness on Ribavirin therapy,indications,contra inications,mechanism of action and side effects.After the responses were received from 100 participants, data was collected and analysed.

Results

7% were aware about Ribavirin therapy (Fig.1). 5% were aware of the mechanism of action of Ribavirin therapy (Fig.2). 5% were aware of the indications of Ribavirin therapy (Fig.3). 3% were aware of the contraindications of Ribavirin therapy(Fig.4).4%.were aware of the side effects of Ribavirin therapy (Fig.5).

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Fig 1: Awareness of Ribavirin therapy

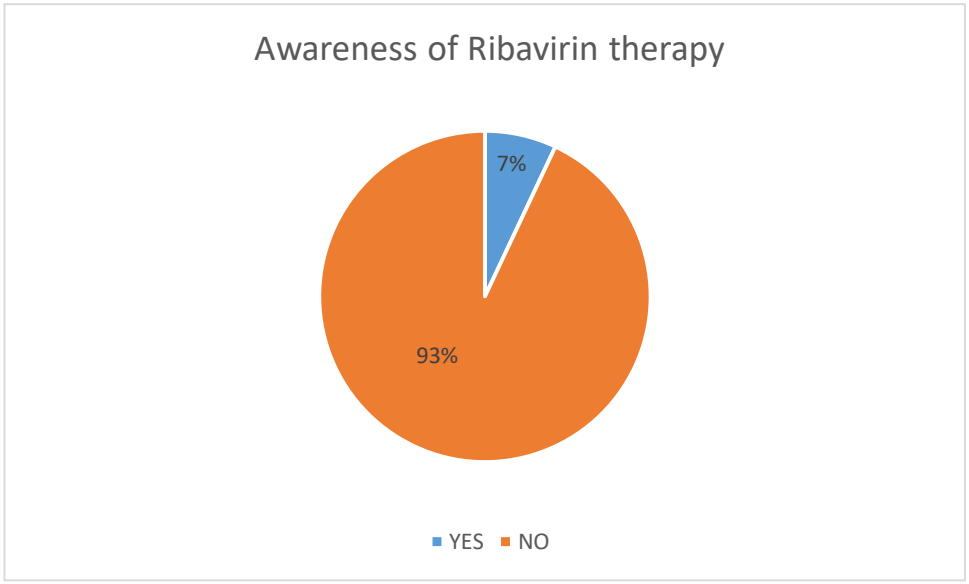

Fig 2: Awareness of mechanism of action of Ribavirin therapy

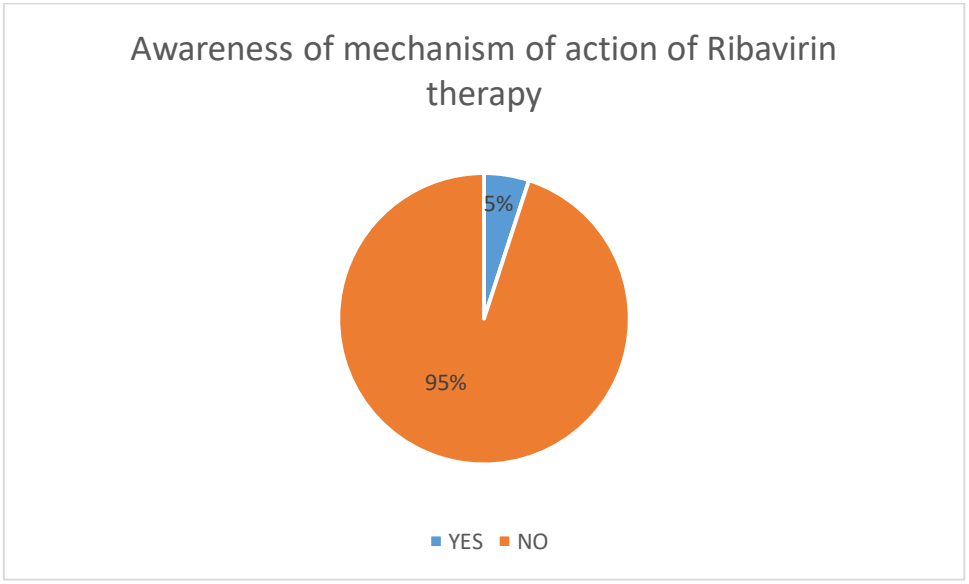

Fig 3: Awareness about the indications of Ribavirin therapy

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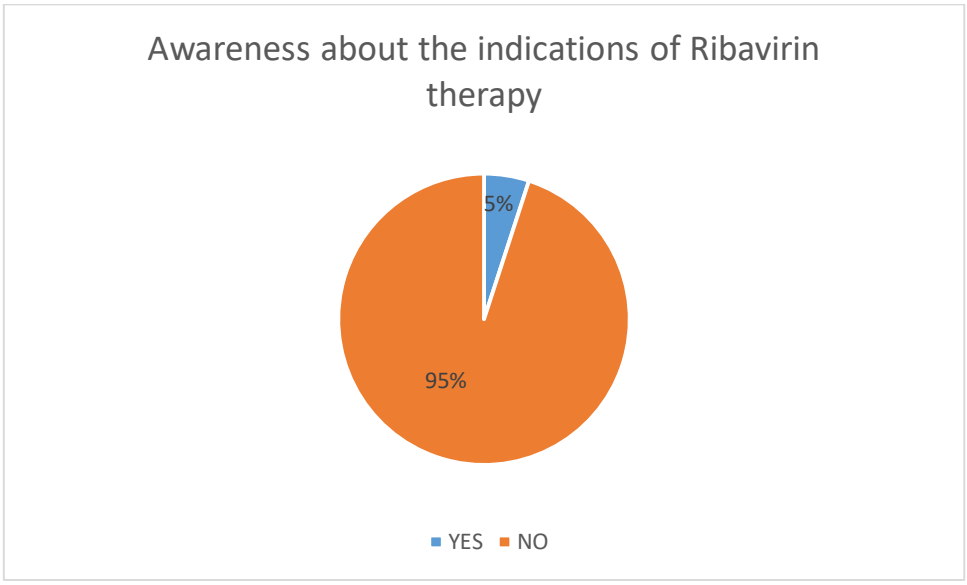

Fig 4: Awareness about the contra indications of Ribavirin therapy

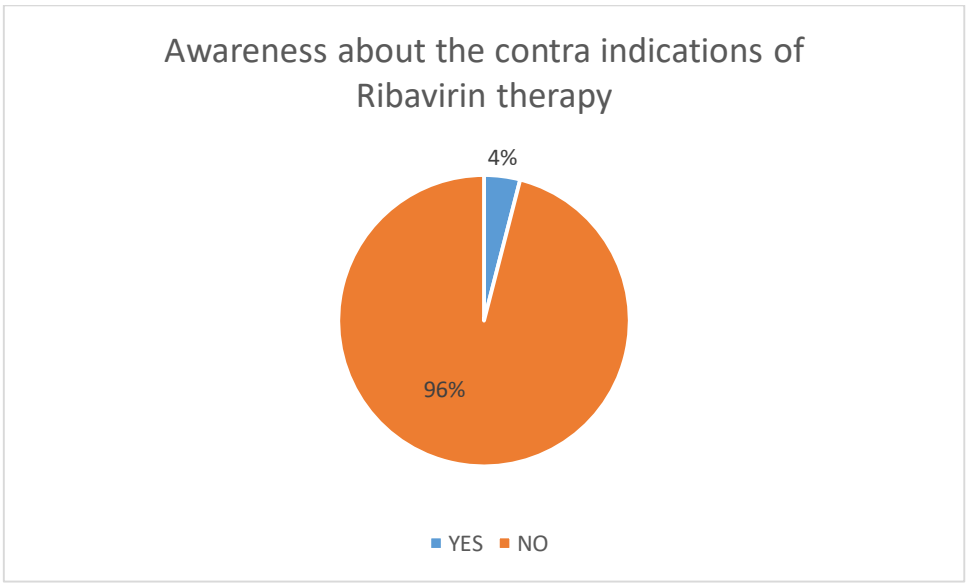

Fig 5: Awareness about side effects of Ribavirin therapy

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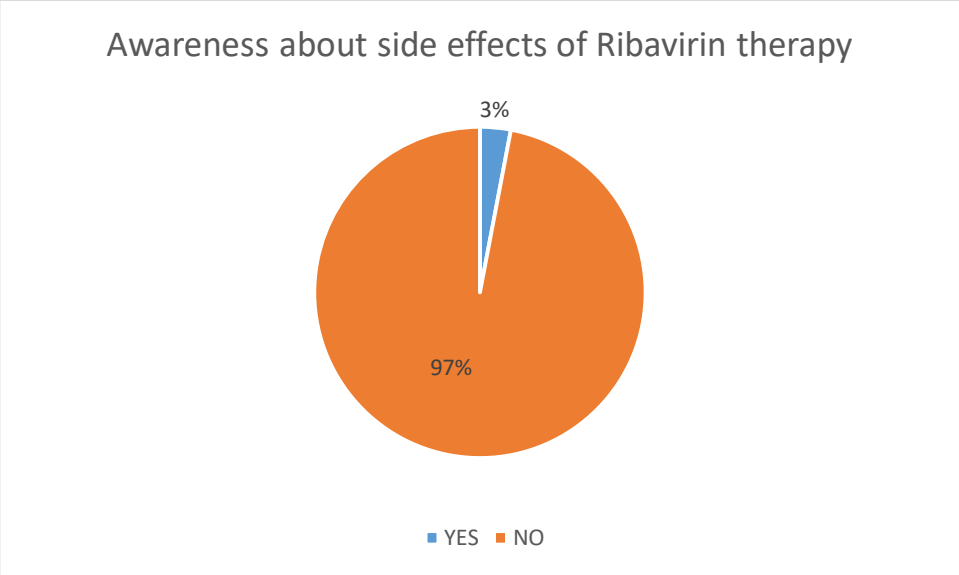

Discussion

Ribavirin is easily preserved over the plasma film by a nucleoside-encouraged vehicle system. Cellular catalysts translate the substance into a few derivatives, particularly mono- , di-, and triphosphates and the deribosylated base. Such subsidiaries thus repress the viral nucleic corrosive union effectively by modifying the normal production of the delivery individual RNA. The 5' triphosphate ribavirin metabolite tends to inhibit the 5' end guanylation of the RNA (mRNA) ambassador, that prevents the effective mRNA officer from becoming a viral polysome. (Smith et al., 1980)

When controlled by airborne conveyance, ribavirin is consumed foundationally. Nevertheless, all things accepted, ribavirin concentration in respiratory passage is stronger than that in plasma. The exchange of ribavirin by vaporization is acknowledged to affect the bioactivity and selection of drugs. Ribavirin was used to control influenza,lassa fever, hepatitis, herpes simplex and zoster. Ribavirin decreased mortality in patients with Lassa fever after 10 days of intravenous medication .Mortality declined from 76% to 32%. Oral ribavirin medication had similar effects in viremic patients. In the event that ribavirin was started inside 6 days after beginning of fever, mortality diminished considerably more dramatically.(Cohen et al., 1976; Togo & McCracken, 1976)

Studies with different portions of ribavirin (300 to 1000 mg/day) have not yet disclosed any conclusive evidence with respect to diagnosis and the prophylaxis of influenza A and viral hepatitis. In any case, prevalences in low-grade or adult flu-tained patients and baseline side effects of less than 24 hours, rewarded with aerosolized ribavirin have indicated a decline in fever duration .The duration of the disease in the awarded bunch was shortened by 24 hours relative to the benchmark community. Clinical preliminary studies of patients measles patientsmanaged with ribavirin have indicated a reduction in both the severity as well the duration of infection..(Bierman et al., 1981; Schröder, 1982)(Schröder, 2007)

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The effectiveness of ribavirin in the management of herpes zoster has also been examined. Ribavirin administered orally and intravenously at a dosage of 400 mg / day for 10 days showed ribavirin reduced the intensity of pain and the extent of injury. One clinical trial of combining ribavirin and placebo medication for treating persistent genital herpes showed ribavirin reduced the frequency of recurrence and promoted recurrence. Patients received 200 mg ribavirin several times daily for 10 days onset of recurrence and positive results were demonstrated .(Bierman et al., 1981; Hahn, 2012)

In spite of the fact that ribavirin has been commonly very much endured, a few pneumonic and cardiovascular unfavorable impacts have been related with aerosolized ribavirin treatment.Some instances of iron deficiency were reported with both oral and intravenous ribavirin. Several transitory increases in liver functional tests, reticulocyte checks, and diminutions in both hematocrit and hemoglobin were estimated as well during oral ribavirin therapy. Ribavirin has demonstrated teratogenic, cancer causing and embryocidal effects in some laboratory animals. (Snell, 2001)

Conclusion

The awareness about ribavirin in managing viral infections was less among dental students.Increased awareness and educational programs should be initiated to spread knowledge about ribavirin therapy.

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