Awareness of rheumatoid arthritis among dental students – A survey
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ABSTRACT
The aim of this study is to assess the awareness about rheumatoid arthritis among dental students. Materials and methods: This research is a survey based study. An online questionnaire was distributed among the students and responses were collected online. The questionnaire was administered through survey planet link. Results and Conclusion: The data was collected and statistically analyzed. It is seen that there was less knowledge about rheumatoid arthritis among dental students. It is necessary to conduct awareness programs among dental students to enrich the knowledge about the various risk factors, etiopathogenesis, treatment modality of the disease.

INTRODUCTION
Rheumatoid arthritis (RA) is a chronic disease of inflammatory origin which is characterized by inflammation of the synovial membrane. This results in the destruction of joint tissues.[1] It was first described clinically by Landre-Beauvais, a French medical student, in the 1800s, in a doctoral thesis. He called the disease as the “primary asthenic gout.” It was then Sir Alfred Garrod gave the distinction between RA and gout in 1859 and gave the disease the present name as “RA.”[2] Paleopathological evidence also shows that the existence of this disease dates back even to 8000 BC in America and in Europe since the 7th century. The recognition of RA as a distinct entity in the 19th century was influenced by socioeconomic circumstances.[3]

The classic characteristic signs and symptoms of this disease are as follows:
• Bilateral presentation
• Symmetric chronic inflammation, i.e., synovitis
• Affects small joints of the upper and lower extremities.

In addition to the typical of inflammatory condition, they may even experience systemic manifestations such as,
• Fatigue,
• Loss of appetite,
• Weakness,
• Vague musculoskeletal pain.

The American College of Rheumatology or ACR revised the criteria for the diagnosis. It had set in 1958 to create a better model for the diagnosis of RA. Stiffness of joints in the morning, arthritis of three or more joint areas, hand joints arthritis, arthritis symmetrical presentation, rheumatoid nodules, serum rheumatoid factors amount, and radiographic changes.[4]

Diagnosis of RA involves no specific laboratory tests. IgM, antibodies directed against other immunoglobulins (Ig), is found in more than two-thirds of adult patients with RA, but they are not specific to RA and are found in patients with a number of other conditions. Specifically, 5% of otherwise healthy people have circulating rheumatoid factors.[5]

Successful management of this condition requires a multifaceted and multidisciplinary approach to treatment. Treatment modalities include systemically administered drugs, local injections of corticosteroids, physical

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therapy, occupational therapy, psychological counseling, patient education, and surgical intervention.\(^6\)

This study investigates the level of awareness of about this disease among dental undergraduates. This was so because RA is said to have certain oral complications. For example, most of the patients with this disease exhibits some temporomandibular joint (TMJ) involvement during the progression of this disease. TMJ involvement is due to the granulomatous involvement of the articular surface of the synovial membrane, leading to destruction of the underlying bone.

Radiographic findings include narrowed joint spaces, flattened condyles, erosions, subchondral sclerosis, cysts and osteoporosis.\(^7\) Moreover, patients with long-standing active RA may have an increased incidence of periodontal disease, including loss of alveolar bone and teeth. The clinical implications of the current data dictate that patients with RA should be carefully screened for their periodontal status.\(^8,9,10\)

This has been a neglected feature of RA. Hence, this study emphasizes the importance of knowledge about RA among health-care professionals.

**MATERIALS AND METHODS**

**Questionnaire Design**

The study was designed as a prospective, questionnaire-based survey. A structured questionnaire enquiring about their knowledge regarding conscious sedation was administered to dental students studying at Saveetha Dental College. An online link was given and the responses were obtained online. The questionnaires were designed to ensure brevity and ease of completion. Each question had a set of options and the students had to choose one option. The sample size was 100.

Questionnaire included the following questions:

1. Do you know about any joint disorders or diseases
2. Are you aware of the cause of the disorder “rheumatoid arthritis”
3. Are you aware of the sex predilection for this disorder
4. What do you think is the most common symptoms of “rheumatoid arthritis”
5. Are you aware of the difference between RA and osteoarthritis?
RESULTS
The online results were represented graphically as shown below.

DISCUSSION
From the above results, it is seen that majority of the students (82%) are aware of disorders of joints [Figure 1]. In concern to RA, Figure 2 shows that about 73% of the students were aware of the cause of the disease RA. It was seen that about 62% of the students knew the sex prediction of the disease [Figure 3]. RA is an inflammatory disorder due to an autoimmune origin, wherein the body cells recognize its own cells as the foreign cells and destroy them. When asked about the symptoms of the disease, only 12% of the population knew about the pain in the joints [Figure 4]. It is necessary to educate the people about the various symptoms so that they can consult a doctor as soon as they start experiencing such symptoms. Only a less population of the people knew the differences between rheumatoid arthritis and osteoarthritis.
A similar study was conducted by Jamie to assess the public awareness of the disease among the British population showed that there was not much knowledge regarding RA. When the participants were asked whom would they consult for their symptoms, only 23% of them were aware that it involves the approach from rheumatologist and orthopedic surgeon. Similarly, a study done by Rindfleisch and Muller proves that complications of RA may begin to develop within months of presentation; therefore, early referral to or consultation with a rheumatologist and an orthopedic surgeon for initiation of treatment with disease-modifying antirheumatic drugs is recommended [Figure 7].

It is also seen that only 25 percent of the population was not aware of the treatment disease [Figure 8]. Also, the Figure 9 shows that only a few percentage of the population was aware of the disease rheumatoid arthritis. This study shows that It is also seen that about 65% of the people are aware that herbal medication intake may delay the progression of the disease [Figure 10]. About 34 % percentage of the people were aware that joint replacement can cure the disease [Figure 11]. It is also is seen that only 37% of the population knew that the intake of gold can cure the disease [Figure 12].

CONCLUSION

It is necessary to early diagnose and treat RA if it is not treated, it can lead to debilitating destruction of bone and cartilage of joints as well as ligaments and soft tissues surrounding the joints which can ultimately cause disability, impact on quality of life by producing pain and limitation of motion, and produce significant effects in terms of productivity loss and cost.

Therefore, to conclude, awareness provoking programs should be conducted among dental students so that they are benefited by it.

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