**Extended Annotated Bibliography (20%)**

1. **When was the work published?**

The work was published on 2013.

1. **What are the main points of the article? Write a 150- 200-word summary of the article that accurately conveys the content of the article.**

This article is about the effectiveness two different antibiotics that can be used along with scaling and root planning for the treatment of patients with chronic periodontal disease. Although it is known that scaling and root planning is the main approach in treating periodontal disease, the use of antibiotics can be used as an additional attempt to reduce or eliminate bacteria located at the base of the epithelial sulcus that cannot be reached with only scaling and root planning. This article used three different test groups to determine the effectiveness of antibiotics in patients with chronic periodontal disease. Patients with scaling and root planning treatment and minocycline microspheres, scaling and root planning and metronidazole gel and only scaling and root planning as treatment. Thus, all treatments showed significant reductions in clinical attachment levels, plaque index and reduction in measurements periodontal pockets but one more than the others.

1. **Does the work meet the standards to be considered an appropriate/ academic/ scholarly source? Justify your choice.**

Yes, it is because it is peer reviewed source.

1. **Are the qualifications of the author(s) appropriate for an academic article? Briefly describe the authors’ qualifications.**

The authors Pandit Nymphea and Bali Deepika are both from the Department of Periodontology and Implantology, D.A.V. (c) Dental College, Model Town, Yamuna Nagar, Haryana, India. Pandit Nymphea collaborated in writing 130 articles all relating medicine while Bali Deepika collaborated 13. Ritu Dahiya and Kathuria Abhinav are from the Department of Periodontology and Implantology, P.D.M. Dental College, Bahadurgarh, Haryana, India Yamunanagar Area, IndiaMedical Practice and both participated in the production of only two articles. Gupta Rajan, Himachal Institute of Dental Sciences, Ponta Sahib, Himachal Pradesh, India collaborated in the publication of 16 articles related in dentistry. All authors in this article have knowledge in dentistry making them qualified to write an article regarding treatment for chronic periodontal disease.

1. **Is the purpose clearly stated? Restate the purpose of the paper in your own words.**

The purpose of this article is to determine the effectiveness two different antibiotics such as minocycline, metronidazole and scaling and root planning alone as a control group in the treatment for chronic periodontal disease.

**Experimental Design and Execution (40%)**

1. **Is the experimental design clearly described? Describe the design in your own words.**

Yes, the experimental design is clearly described. It is an experimental investigation, that was done randomized clinical trial in which 9 females and 11 males were enrolled to this experiment. In which the Gold Standard Research is scaling and root planning to test the efficacy of antibiotics to treat chronic periodontal disease. It is clearly stated that it is a parallel design experiment where minocycline and metronidazole are the experimental groups and scaling and root planning (SRP) is the control group. It is also a longitudinal experiment where the sample groups where assessed baseline to 1 month and 3 months in all three groups.

1. **Have the possible influences on the findings been identified and controls instituted? Describe and evaluate the use of controls and possible influences (spurious variables)**

The control in the experiment is scaling and root planning alone for the treatment of chronic periodontal disease.

1. **Has the sample been appropriately selected (if applicable)? Describe the sample used in the study, and evaluate its appropriateness.**

The sample size was randomly selected to give everyone one in a community randomly selected to give everyone one in a community to get tested. The sample size for this experiment was 20 people, 9 women and 11 men. This is an inadequate sample size since minimal size of each group should be 26-30 people. Sample size must be large enough to accommodate any expected losses of people in order to be able to demonstrate differences between groups by statistical logic. If the groups are too small, it may be difficult to note a statistical difference.

1. **Has the reliability and validity of the article been assessed? Evaluate, and state the test/diagnosis results.**

This article doesn’t include if it is double sided or single sided it only provided with the information that the subjects were chosen randomly. This could have affected the results and we won’t be able to know since this information was not included in the experiment. But this is a peer-reviewed article giving it validity and preventing authors to be bias on the results during this experiments. The experiment was to determine the effectiveness between two antibiotics minocycline and metronidazole and scaling and root planning alone as a control group. The results showed that all three groups had an improvement after SRP treatment and antibiotics administration as well as SRP alone. But the one with most significant improvement was the group that experimented with minocycline.

1. **Is the experimental therapy compared appropriately to the control therapy? Describe and evaluate the use of the control group.**

The experimental therapy was compared to the control therapy effectively. It concluded that the control group had improvement in clinical attachment level, plaque index, gingival index and pocket depth but not as significantly as minocycline and metronidazole.

1. **Is the investigation of sufficient duration? Evaluate, and explain your reasoning.**

The experiment was performed for 30-day duration. I believe this is enough time to determine the effectiveness of SRP along with the use of either antibiotic. Since it was done in a longitudinal period which provides with better information of any changes occurring during different time periods.

**Results and Critique (40%)**

1. **Have the research questions or hypothesis been answered? Restate the research questions and/or hypotheses in your own words, and describe if or how they are answered.**

The research question was whether minocycline or metronidazole antibiotics used as an adjunct with SRP was best for the improvement in chronic periodontal disease. The results showed a significant improvement during minocycline administration.

1. **Do the interpretations and conclusion logically follow the experimental finding?**

**Restate the conclusion, and explain if or how they follow the experimental findings.**

Yes, the interpretations and conclusion does logically follow the experimental findings. In conclusion, all three experiments showed an improvement in the treatment of chronic periodontal disease. But minocycline was the experimental group that showed a greater significant improvement in periodontal pockets and clinical attachment levels.

1. **Do you agree or disagree with the article and findings? Explain why?**

I do agree with the findings of minocycline being more effective than metronidazole or SRP alone in the treatment for chronic periodontal disease. The mean for clinical attachment level and pocket reduction was the greatest in this experimental group.

1. **What would you change in the article? Why? Think outside of the box. What would you add or delete.**

I would probably change the sample size to a larger sample size since it would help me better results. I would add more information about the effects of antibiotics in periodontal disease. As well as adding information if the experiment was a single or double sided since it can affect the results.