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Course Number

Date

ANTIBIOTICS

The use of antibiotics has always been critical in fighting infections. However, when an antibiotic is used too often, the very bacterium it is designed to attack develops a resistance to it, making the antibiotic ineffective. That is one of the reasons pediatricians, for example, do not like to prescribe antibiotics to children unless absolutely necessary. They often explain to the parents that certain illnesses, such as a viral infection, must simply run its course.

Unfortunately, parents typically do not understand that not every illness, even those that seem more severe such as the common flu, do not require medication (Kent 45). Instead, the child needs rest, plenty of fluids, hot soup, etc. It is the responsibility of the attending physician to explain to the parents why antibiotics are not only helpful, but in the long term, possibly harmful to their child when administered without actual need. Research has shown that most parents are willing not to push for antibiotics if the physician offers an adequate explanation of the concern. However, it is important for the physician to provide parents with alternative treatments, such as using a vaporizer to break up congestion and ease breathing. Parents do not want to feel helpless in getting their children to feel better or to become well again. In addition, parents need to be educated by their family physicians or pediatricians as to what antibiotics

should be used for, as well as how the use of antibiotics interacts with the environment in general.

The above opinions about educating parents on the purpose and use of antibiotics to treat illnesses in their children are supported by a study on parental attitudes about antibiotic intervention. Participants in the study were parents who brought their children to pediatric clinics located in the Jerusalem-Hashfela District. Participants were designated as belonging to one of two groups, Groups A or B. Group A was designated as the control group while Group B was provided with stimuli in the way of educational information on the pros and cons of antibiotic use to treat illnesses. The number of participants surveyed in the study included 1556 parents. Group A had 868 participants and Group B had 688 participants.

Participants in Group A completed self-response questionnaires focusing on demographics, their children's symptoms of illness, prior use of antibiotics, and the participants prior knowledge concerning the purpose and use of antibiotics to treat certain kinds of illnesses. Prior knowledge included the possible side effects in using antibiotics as well as the potential of the development of resistance to the future use of the antibiotic. Part of the questionnaire also pertained to parental expectations on having antibiotics prescribed for their child's current illness, their willingness to comply with the physician's decision, and their personal opinions about using antibiotics to treat the child's illness. Both Group A and B participants were given a second survey to complete following the visit with the physician. The second survey items included the physician's diagnosis of the child's illness as a viral infection, bacterial infection, or other kind of illness. Items also included whether the physician suggested prescribing an antibiotic as treatment and whether the physician suggested other forms of treatment. In addition,

items involved whether parents felt that antibiotics were needed, and their level of confidence in the physician's decision to treat the illness with or without antibiotics.

Group B participants were bombarded with information on the appropriate use of antibiotics. The information was disseminated in various ways and was done so prior to the children being seen by the physician. Information included wall posters that advocated against the use of antibiotics and pamphlets discussing the differences between viral and bacterial infections, the side-effects of using antibiotics, and the development of resistance to antibiotics, which can contribute to future difficulty in addressing infections. In addition to the educational material prior to seeing the physician, the physicians were required to discuss with parents what decisions they made in whether or not to treat the child's illness with antibiotics. Finally, the children were provided with booklets containing stories that were designed to discourage the use of antibiotics. Group B participants were also provided with a second questionnaire to determine whether they were aware of the wall posters in the clinic, whether or not they received and read the pamphlets, and whether they received information from the attending physicians concerning antibiotics. From there, Group B was divided once more, with Group B 1 consisting of parents who did not receive or notice the educational interventions designed for that group. Moreover, descriptive statistical analysis was employed to provide additional validation for the study's findings. In addition, a logistical analysis was used for both Groups A and B.

Findings

The demographics of the two groups had no bearing on prior knowledge the parents had in reference to the pros and cons of antibiotics to treat illnesses, such as when antibiotic use is appropriate as well as the long-term concerns in using antibiotics, such as effects on environment

and a build-up resistance to the effectiveness of antibiotics later in life due to earlier overuse. However, the post-survey showed a significant difference between Groups A and B on a number of questions parents asked the physician in what kind of illness their child had and treatment options, including the appropriateness of treating the illness with antibiotics and concerns for long-term effects on the utilization of antibiotics.

Group B parents asked more questions during the doctor's visit than did Group A parents. In reference to the physician's decisions for treatments and accompanying explanations, Group B was more satisfied with the outcomes and expressed a higher level of confidence in their physicians' decisions. Moreover, children age 6 or older who were provided with booklets containing stories promoting negative attitudes about treatment with antibiotics also asked questions and showed signs of apprehension about being prescribed medicine, meaning antibiotics.

Conclusion

Educating parents about the differences between viruses and infections, as well as how antibiotics work in general to treat infections made a significant difference in their understanding and acceptance of the physician's decision on how to treat the illness. Moreover, parents advocated for their children by asking for alternative treatments. In reference to the booklets children received, providing a negative message about antibiotics to the children made them overly anxious about taking medicine. This is a concern because sometimes antibiotics are needed for treating an infection. Therefore, parents and, as is age-level appropriate, children should be educated about the differences between viral infections and infections caused by

bacteria. They should also be educated as to how each should be treated, the need to finish an antibiotic as prescribed, and the need to prevent the overuse of antibiotics.

Work cited

Kent, Michael. *Advanced Biology*. Oxford: Oxford University Press, 2000. Print.