Arthritis NZ Summer Scholarships Reporting Template

Name of Student

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Project Title

Intentional non-adherence with methotrexate in patients with inflammatory arthritis

Statement Regarding Arthritis NZ Sponsorship

We would like to thank Arthritis New Zealand for sponsoring this Summer Scholarship, which enabled a third-year medical student to work on the research project 'Intentional non-adherence in patients with inflammatory arthritis'. Through working on this project, they have developed valuable skills and experience in communicating with people who live with arthritis and in how to conduct clinical research. This research project aims to improve our understanding of peoples' experiences of taking methotrexate. The results will help us to better support people with arthritis in their decision-making about taking methotrexate.

Student's Personal Comment About Study/Experience

"The research experience has been immensely valuable to me. It has allowed me to get a taste of the research process and grow an investigative mindset. I have become more analytical in the way I work and more willing to ask important questions. The experience has strengthened my conceptual understanding of what I knew about research, enabling me to become more aware about how the process impacts clinical practice and makes a difference in the real world. Participating in this project and the consequent interactions with those supporting me have helped me develop problem-solving abilities, critical thinking, and communication skills, all of which will be of importance in both my professional and personal life. Having the opportunity to interview patients with inflammatory arthritis has opened my eyes to many of the struggles these individuals go through. This will help me to become more caring and empathetic in my future role as a doctor. Furthermore, it has helped me to critically appraise information which will assist me as a future doctor to direct patients towards accurate and reliable sources of information. Overall, I have enjoyed this experience, learned valuable skills, and I hope to continue to be involved in research in the future.

We have learned that many patients with arthritis experience side effects from methotrexate such as nausea, and would like more information about methotrexate. This is very beneficial to us as it will allow us to communicate more effectively with patients to address their concerns better."

Summary of the Project

Aims of project

The aim of this project was to explore the reasons why people with arthritis decide whether to take, or not to take, methotrexate. Methotrexate is a common medication used to help manage arthritis.

People with arthritis completed a questionnaire which explored their reasons for deciding whether or not to take methotrexate, their concerns about methotrexate, their experience of having arthritis, whether they researched methotrexate online when they were prescribed it, and whether they had missed doses of methotrexate.

Key results

A preliminary analysis of the first 42 participants was completed. There were 10/42 (24%) and 11/42 (26%) participants who missed a dose of methotrexate over the last 4 weeks and 3 months, respectively. The strongest motivation participants had for wishing to stop methotrexate was side effects, which 11/42 (26%) agreed with, followed by 'because methotrexate is harsh on my body' which 10/42 (24%) agreed with.

One of the side effects most attributed to methotrexate was nausea, which 15 participants experienced and 10/15 (67%) thought could be related to the methotrexate. Dry mouth was experienced by 17 participants, with 8/17 (47%) believing it could be caused by methotrexate.

Participants believed their arthritis would last a long time (average score of 7.5 out of 10) and were concerned about their arthritis (average score of 9 out of 10). There were 27/42 (64%) participants who researched methotrexate online. Of these 27 participants, 4/27 (15%) changed their mind about whether to take methotrexate based on their research.

Discussion

About a quarter of participants had missed a dose of methotrexate over the last three months. Lower rates of methotrexate use are associated with greater rheumatoid arthritis activity and accelerated disease progression, so addressing reasons for missing doses could help to improve patient outcomes (1-3). The most common reason identified in this study for missing a dose was side effects, particularly nausea, which was experienced by more than a third of participants. Discussing how to manage side effects when first prescribing methotrexate may help to improve patients' experience of taking the medication.

As many participants were concerned about their arthritis, it would also be beneficial for clinicians to discuss these concerns with patients. There were a high percentage of participants who researched methotrexate online when they were first prescribed it. Many online sources of methotrexate patient information are written at a grade level that is higher than is recommended (4) so ensuring that patients know where to access high quality patient information about both methotrexate is important.

Conclusion/key recommendations

Specific areas of concern identified so far from the research include the side effects such as nausea, and that methotrexate can be harsh on the body. To improve patient care, these are topics that clinicians should discuss with patients and their families when they are starting methotrexate. Discussing strategies to manage nausea could help to improve patient experiences. This research also highlights the importance of clinicians discussing where to access high quality sources of patient information about methotrexate with patients when prescribing the medication.

References

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