Knowledge and Perceptions of Orthobiologics Among Patients: A Qualitative Cross-Sectional Analysis

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INTRODUCTION: Musculoskeletal conditions affect over 33% of the U.S. population, highlighting the need for innovative treatments such as biologic therapies. Despite advancements and the increased adoption of orthobiologics by 66% of sports medicine physicians, patient understanding of these therapies remains largely unexplored. Orthobiologics show promise in managing musculoskeletal issues, but commercialization and misinformation may lead to inflated patient expectations. This study aimed to examine patient knowledge and perceptions of orthobiologics, identify misconceptions, understand information sources, and determine the most important factors for patients when deciding to use orthobiologics. The authors hypothesized that significant misconceptions about their use and efficacy would emerge.

METHODS: Between October 2023 and April 2024, a cross-sectional, single-center study was conducted at an orthopedic clinic, engaging English-speaking patients over the age of 18 to explore their understanding of orthobiologics. A comprehensive questionnaire was developed and administered, covering demographic information, attitudes towards orthobiologic therapies, medical history, and sources of information about these therapies. The survey captured both quantitative and qualitative data through multiple-choice questions and Likert scales, assessing participants' knowledge and perceptions of the safety and efficacy of orthobiologic treatments. Statistical analysis involved the use of chi-square or Fisher's exact test for categorical variables, with a significance threshold set at p<0.05.

RESULTS: A total of 357 respondents were analyzed, resulting in a complete response rate of 84.4%. The majority of respondents were female (56.6%, n=202) and within the 25-34 age group (33.3%, n=119). Among the respondents, 44.0% (n=157) were familiar with orthobiologics. Education level was the only baseline factor that significantly impacted orthobiologic awareness, with higher education being associated with greater familiarity (p = 0.006). Within the entire cohort, respondents most frequently believed that orthobiologics could manage pain and inflammation (70.8%, n=253) and treat cartilage injuries (66.9%, n=239). The most recognized treatment among those familiar with orthobiologics was platelet-rich plasma (77.1%, n=121), followed by mesenchymal stromal cells (56.7%, n=89) and bone marrow aspirate concentrate (38.2%, n=60). Overall, 45.9% (n=72) of patients familiar with orthobiologics believed in their capacity to reduce pain, and 36.3% (n=57) believed these therapies could increase the rate of healing. Belief in the adequacy of current evidence was mixed, with 37.6% (n=59) deeming it insufficient and 15.3% (n=24) considering it adequate. The most influential factors in patients' decisions to want orthobiologics as part of their care included cost (68.8%, n=108), recommendations from orthopedic surgeons (63.1%, n=99), and potential side effects (57.3%, n=60). Increased curiosity and interest in learning more about orthobiologics were reported by 86.0% (n=135) of respondents who had heard about these therapies. Primary sources of information included orthopedic surgeons (38.2%, n=60), other physicians (33.8%, n=53), and friends or family (32.5%, n=51).

DISCUSSION AND CONCLUSION:

Patients have significant knowledge gaps and misconceptions regarding orthobiologic therapies, with educational background influencing awareness. Despite familiarity with specific orthobiologics, many patients hold inaccurate beliefs about their efficacy and application. Factors such as cost, potential side effects, and recommendations from orthopedic surgeons influence patient decisions. Physicians remain the primary reliable information source, crucial in reducing misinformation. Enhanced educational initiatives are needed to improve patient understanding and informed decision-making regarding orthobiologic treatments.

