

# Arthroscopy: Diagnostic and Surgical Practice

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LEA & FEBIGER

1984

Philadelphia

## Part I

# DIAGNOSTIC ARTHROSCOPY

Diagnostic arthroscopy and, perhaps even more important, arthroscopic surgery constitute what is probably the outstanding achievement in orthopedic surgery in the past decade. Almost universally accepted now, arthroscopy is indispensable to those who specialize in the care of athletes and is relied upon more and more by general orthopedists because its diagnostic accuracy in experienced hands is at least 20% greater than that of clinical diagnostic techniques.<sup>1-4</sup> Perhaps no other advance in orthopedic surgery was so long delayed. The articles by Burman, Finkelstein, and Mayer in the early 1930s provoked no surge of interest in the orthopedic world,<sup>5</sup> and even the authors themselves abandoned their early efforts. Although lack of sophisticated arthroscopes may have been in part responsible, the available scopes enabled these clinicians to make an outstanding, if unappreciated, contribution to orthopedic surgery. The same indifference greeted the early efforts of Takagi and his successor, Watanabe,<sup>6</sup> who developed the first practical arthroscope in 1960. Their efforts, however, did not come to the attention of orthopedic surgeons in other parts

of the world until some years later. Although rheumatologists were among the early users of the arthroscope in the late 1960s,<sup>7,8</sup> orthopedic surgeons are primarily responsible for its development and progress.

Papers on the subject appeared in the *Journal of Bone and Joint Surgery* in 1971 by Casscells<sup>1</sup> and in 1972 by Jackson and Dandy,<sup>2</sup> and these were followed in 1973 by the first course in arthroscopy, organized by Joyce and Harty at the University of Pennsylvania.

The International Arthroscopy Association was founded in Philadelphia in 1974, and in 1975 the first course was given, under the sponsorship of the American Academy of Orthopaedic Surgeons in Boston, with McGinty as course chairman. This course was followed by many others throughout the country, and the trend continues. Despite the location of the first course at the University of Pennsylvania, arthroscopy, both diagnostic and surgical, grew up largely outside the confines of academia, and most of the pioneers in the field were physicians in private practice, an indication that all orthopedic surgeons are in



a position to make a contribution to our specialty.

As with so many technical advances in surgery, problems pose questions to which we have inconclusive answers. In arthroscopy, some of the problems stem from the difficulty inherent in diagnostic and surgical arthroscopy as a skill, both to learn and to teach. Until as late as 5 years ago, there was a paucity of interest in arthroscopy, and the voices crying in the wilderness who advocated its use were lonely indeed. It has recently become evident, however, that many orthopedic surgeons wish to learn both diagnostic and surgical arthroscopy. As a direct result, the demand for courses on this subject has risen, perhaps because no orthopedic procedure requires so much experience for the learner to become proficient. Those with the greatest experience in this field now realize that many surgeons are unable to acquire the needed hand-eye skills, partly because the volume of cases needed to obtain the necessary experience is larger than encountered in many orthopedic practices. Those who contemplate arthroscopy would be wise to review the amount of clinical material available to them. Younger surgeons, whose minds are perhaps more receptive to new ideas and techniques, seem to learn more quickly.

In 1975, arthroscopy was underused, and needless arthrotomies were performed. The pendulum is now swinging rapidly in the other direction. The current tendency in arthroscopy is toward overuse. Some surgeons seem to be unable to distinguish between patients who are good candidates for arthroscopy and those who are not, and the trend is toward arthroscopy in patients in whom little likelihood exists of finding any treatable disorder. As has been pointed out,<sup>9</sup> the yield in any diagnostic test may be too low to justify the cost. In the case of arthroscopy, the cost is considerable. Walter Alvarez has said that "the average patient demands tests, plenty of them."

This statement now applies to arthroscopy because, as a result of national publicity in lay publications, patients want the procedure to be performed on their own knees and are often unwilling to be treated by anyone who is not familiar with arthroscopy.

In this book, technique is discussed, but more important, it is related to the underlying disorder suspected, to the need for such a test, and to the benefits to the patient from such a test. That arthroscopy does not appeal to all who practice general orthopedics is fortunate, considering the learning difficulties. Many orthopedic surgeons, however, still wish to acquire the necessary expertise and perform arthroscopic examinations on patients in whom the likelihood of finding articular disease is remote. Just as the pendulum in arthroscopy has swung from underuse to overuse, so will it find its proper place between these extremes. I hope that this book helps those who read it to distinguish between patients who should be treated arthroscopically and those who should not.

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