

# Rheumatologists from Brazil's Country are Skilled in Interventional Medicine

**Objects:** Describe Brazilian rheumatologists's capability in interventional rheumatology; assess the association between this capability and demographic and training variables.

**Methods:** Across-sectional study with 500 Brazilian rheumatologists. Actors were assessed by tone- administered questionnaire conforming of demographics, training, practice in office and knowledge in interventional rheumatology data.

**Results:** 463 actors had their data anatomized. The mean age was 40.2 times ( $\pm 11.2$ ). 70 had performed per articular injections and 78 had performed intra-articular injections. The sample was divided into three groups on-interventionist, little interventionist and veritably interventionist. Then on-interventionist group showed ( $p=0.001 -0.04$ ) advanced mean age, lower proportion of university bond, lower training history, advanced proportion of graduates in the southeast country, and advanced proportion of graduates in the 1980s to 1989. The veritably interventionist group showed advanced ( $p=0.001 -0.018$ ) proportion of adult rheumatologists, advanced proportion of university bond, longer training time with lesser practice of complex procedures, and advanced proportion of graduates, trained and with private practice in the south country. Variables most associated with the veritably interventionist group are performing axial intra-articular injections (or 7.4,  $p=0.001$ ), synovial vivisection (or 5.75,  $p = 0.043$ ), image- guided iai (or 4.16,  $p=0.001$ ), viscosupplementation (or = 3.41,  $p=0.001$ ), common lavage (or = 3.22,  $p = 0.019$ ), salivary gland vivisection (or = 2.16,  $p = 0.034$ ) and over 6- month training (or 2.16,  $p = 0.008$ )

**Conclusion:** Performing more complex invasive procedures and over 6- month training in interventional rheumatology were variables associated with enhanced interventional profile

**Keywords:** Common injection • Capability • Rheumatologist • Training

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## Introduction

Rheumatology is considered only a clinical specialty by numerous. But in fact, the practice involves a series of interventions that help the croaker in the opinion and treatment of rheumatic conditions. Interventional rheumatology has been part of the moxie for over half a century, when the practice of intra-articular injection (IIA) with corticosteroids (css) began. This remains the most common procedure performed by rheumatologists currently. The per articular injections (pis) with css can be used for the treatment of seditious soft towel as the first choice or indeed in refractory cases. The use of image ways can ameliorate the effectiveness of common injection, both intra- and per articular. Other procedures related to patient opinion include

synovial, bone, muscle, and salivary gland necropsies.

There are many studies assessing the intervention's capability of rheumatologists throughout the world. Some studies concentrate on rheumatologist's capability to perform musculoskeletal ultrasound (MU) for individual purposes or for guiding procedures.

There are no published studies assessing the theoretical capability in interventional rheumatology among Brazilian rheumatologists. It's believed that there's a large diversity in training to perform osteoarticular procedures in Brazil.

The points of this study were to describe the capability of Brazilian rheumatologists in interventional rheumatology, assess the

association between their capability and demographic variables, and between their educational training in order to try to identify variables associated with further interventional rheumatologists [1, 2].

### Materials and Method

This was across-sectional study reviewed and approved by the Ethics Committee of the Universidad Federal de São Paulo, São Paulo, Brazil. Five hundred Brazilian rheumatologists were aimlessly named and assigned to share in the study. Actors were named during the most important periodic Rheumatology meeting of the Rheumatology Brazilian Society conducted in the southeast region of Brazil.

The following addition criteria were used being a rheumatologist or a pupil in the final time of Residency in rheumatology and subscribing the informed concurrence. The study's rejection criterion wasn't being a rheumatologist (medical scholars, resident croakers in other specialties, medical experts in other areas, and without specific medical specialty) [3, 4].

### Assessment

Actors were assessed through tone- administered questionnaire. The questionnaire comported of two corridor the first related to the demographic characteristics and training in interventional rheumatology and the alternate related to the capability in interventional rheumatology.

The first part of the questionnaire comported of the following particulars age; venue and time of scale; institution of occupancy/ specialization in rheumatology; title of specialist in rheumatology, masters or phd degrees; university bond and private practice.

The alternate part of the questionnaire comprised the following particulars related to practice in interventional rheumatology training in invasive procedures during medical occupancy/ specialization; practice in invasive procedures; practice in PI and fitted structures; practice in appendicular IAI, fitted joints and suggestion for the procedure; axial IAI practice and fitted joints; CS used in PI and reason for choice; CS used in IAI and reason for choice; practice in PI and IAI image- guided injections and image fashion used to guide the procedure; practice in viscosupplementation, common lavage, epidural injection with CS and synovial, salivary gland, bone and muscle necropsies. [5, 6].

### Discussion

In Brazil, the vast maturity of rheumatologists has some kind of specific training in interventional rheumatology

during medical occupancy or specialization. In the present study, utmost Brazilian rheumatologists assessed performed procedures in rheumatology, with IAI being more common than PAI. Performing more complex invasive procedures, viscosupplementation, and over 6- month training in interventional rheumatology were variables associated with a further interventional profile.

According to the Brazilian Ministry of Education and Culture (MEC), arthrocentesis, IAI and PI are chops that must be acquired throughout occupancy in rheumatology, as part of the sanctioned program of the specialty training. Procedures similar as necropsies (bone, skin, minor salivary gland, muscle and subcutaneous), MU, whim-whams indigenous blocking and epidural injection are considered voluntary; indeed if recommended.<sup>15</sup> Despite the actuality of this theoretical program, it's known that diversity among programs is huge.

We believe that the questionnaire used in this study has covered most variables related to the practice of Brazilian Rheumatologists in interventional rheumatology. At the time the data were collected, we didn't find in the literature any other analogous study involving Brazilian rheumatologists. There were, still, studies assessing the practice and education of the rheumatologist in MU and the practice and training in IAI and PI of general interpreters [7, 8].

Studies published by Gormley. (2005) addressed the practice of IAI and PI among United Kingdom general interpreters. Both studies reported shoulder, knee and side epicondylitis injections as the most generally performed. Among the factors, those that told the moxie in IAI and PI were manly gender, practice in pastoral region and formal training in those procedures.

Our sample comported of 463 actors with a mean age of 40.2 times and the vast maturity (95.9) was composed by rheumatologists seeing only adult cases. The chance of appendicular IAI interpreters (78) was advanced than PI interpreters (69.9), and a much lower chance reported performing axial IAI (10.9).

Among the pis, the most fitted was side epicondyle (87.6), in which was analogous to studies conducted by Gormley in 2003 and Liddell in 2005. Among the joints most generally fitted, the knee stood out with 99.4. This fact is presumably due to the wide variety of rheumatic and orthopaedic conditions that affect this joint. In addition, it's the largest joint of the locomotors system and it's fairly superficial, which favours the possibility of performing safe procedures blindly.

Among the most generally CS used in pis, the most used in this study was betamethasone (62.2). Still, it was observed that 23.3 of actors reported using triamcinolone hexacetonide for this procedure, which is a potentially dangerous practice for the case due to its devolving characteristic.

For the IAI, the most habituated CS was triamcinolone hexacetonide (65.4), also considered the most effective (67.3). Comparing these data with those set up by

Centeno and associates in 1994, we observed that among American rheumatologists, methylprednisolone was the most habituated CS for knee IAI, while in Brazil the most used was triamcinolone hexacetonide.6 still, triamcinolone hexacetonide was considered the effective CS by both American and Brazilian rheumatologists [9, 10].

#### Conflict of Interest

None declared.

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