

## WJO 5th Anniversary Special Issues (10): Rheumatoid arthritis

**Impact of rheumatoid arthritis on sexual function**

Antonio G Tristano

Antonio G Tristano, Rheumatology Department, Centro Médico Docente La Trinidad, 1080-A Caracas, Venezuela

Antonio G Tristano, Centro Medico Carpetana, 28025 Madrid, Spain

Author contributions: Tristano AG solely contributed to this paper.

Correspondence to: Antonio G Tristano, MD, MSc, FACP, Centro Medico Carpetana, Manuel Alvarez 3-4, 28025 Madrid, Spain. [antoniotristano@yahoo.com](mailto:antoniotristano@yahoo.com)

Telephone: +34-685-475345 Fax: +34-915-256422

Received: November 25, 2013 Revised: March 7, 2014

Accepted: March 13, 2014

Published online: April 18, 2014

**Abstract**

Sexuality is a complex aspect of the human being's life and is more than just the sexual act. Normal sexual functioning consists of sexual activity with transition through the phases from arousal to relaxation with no problems, and with a feeling of pleasure, fulfillment and satisfaction. Rheumatic diseases may affect all aspects of life including sexual functioning. The reasons for disturbing sexual functioning are multifactorial and comprise disease-related factors as well as therapy. Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease characterized by progressive joint destruction resulting from chronic synovial inflammation. It leads to various degrees of disability, and ultimately has a profound impact on the social, economic, psychological, and sexual aspects of the patient's life. This is a systemic review about the impact of RA on sexual functioning.

© 2014 Baishideng Publishing Group Co., Limited. All rights reserved.

**Key words:** Sexuality; Sexual functioning; Sexual dysfunction; Rheumatoid arthritis**Core tip:** Sexual functioning is a neglected area of qual-

ity of life in patients with rheumatoid arthritis (RA) that is not routinely addressed by physicians or health professionals. Sexual functioning is also not part of questionnaires frequently used to assess physical function or quality of life. It is therefore important that physicians or any other health professionals in charge of handling these kinds of patients raise the subject of sexuality and discuss it with them. On the other hand, there are not enough studies comparing sexual functioning between RA patients and healthy controls and the impact of the treatments usually used in RA in improving sexual function. Because of the impact of this chronic inflammatory disease on sexual function and because there are not enough overviews about the impact of rheumatoid arthritis on sexual function, this systematic review is intended to cover this important but underestimated problem.

Tristano AG. Impact of rheumatoid arthritis on sexual function. *World J Orthop* 2014; 5(2): 107-111 Available from: URL: <http://www.wjgnet.com/2218-5836/full/v5/i2/107.htm> DOI: <http://dx.doi.org/10.5312/wjo.v5.i2.107>

**INTRODUCTION**

RA may affect all aspects of life including sexual functioning. These factors include: pain, fatigue, stiffness, functional impairment, depression, anxiety, negative body image, reduced libido, hormonal imbalance, and drug treatment<sup>[1]</sup>.

The percentage of arthritic patients who experience sexual problems ranged in various studies from 31% to 76%<sup>[2-3]</sup>. The reasons for disturbing sexual functioning are multifactorial and comprise disease-related factors as well as therapy. It can occur before, during and after sexual activities, and can affect sexual health in different perspectives. Normal sexual functioning consists of sexual activity with transition through the phases from arousal to relaxation with no problems, and with a feeling of pleasure,

fulfillment and satisfaction<sup>[6,7]</sup>. Sexuality and its expression are important for healthy and ill individuals and therefore a crucial part of an individual's self-identity<sup>[8]</sup>.

There are not enough studies comparing sexual functioning between rheumatoid arthritis (RA) patients and healthy controls. However, there is a tendency to find more sexual functioning problems in patients with RA. These patients could experience sexual disability and diminish sexual drive, with pain and depression being the most common symptoms.

## SEXUAL FUNCTION IN RA PATIENTS

Sexual functioning is a neglected area of quality of life in patients with RA that is not routinely addressed by physicians or health professionals. Sexual functioning is also not a part of questionnaires frequently used to assess physical function or quality of life. In a recent survey of ten rheumatologists, only 12% of patients seen in their practice were screened for sexual activity. The reasons given by rheumatologists were time constraints, discomfort with the subject, and ambivalence whether such a screening is in their domain or not<sup>[9]</sup>.

The sexual problems in RA could be attributed to physical and psychological variables. Physical variables include difficulties in performing sexual intercourse (sexual disability), while psychological variables include depression, altered body image, worries about partner interest, and diminished sexual drive reflected in both diminished desire and satisfaction<sup>[2,10-14]</sup>. Difficulty in assuming certain positions when hip or knee movements are limited, dyspareunia due to vaginal dryness in secondary Sjogren's syndrome, and joint pain and fatigue during intercourse are the principal manifestations of sexual disability; the latter is experienced by 50%-61% of RA patients<sup>[11,15,16]</sup>.

The majority of patients with RA are female, and there are differences in sexual health between women and men with RA<sup>[17]</sup>. It has been shown that women with RA have fewer sexual fantasies and masturbate less than controls, and during intercourse, pain is the dominant problem, as well as limited joint mobility, but there are no differences in satisfaction<sup>[15,18]</sup>.

On the other hand, in a study of male adolescents and adults with juvenile idiopathic arthritis (JIA) masturbation and intercourse were practiced equally between patients and controls, although joint pain during intercourse was significantly more frequent among patients. Moreover, although some patients experienced joint pain associated with greater functional disability as indicated by higher HAQ scores, overall sexual pleasure and satisfaction were preserved<sup>[19]</sup>. In contrast, van Berlo *et al*<sup>[18]</sup> found that adult males with RA felt less sexual desire than controls (healthy volunteers); however, patients do not differ from controls regarding sexual satisfaction.

Packham *et al*<sup>[20]</sup>, in a study of 246 adult patients with long-standing JIA, found that 50% of them felt a detrimental effect on body image but only 28.2% of the patients experienced problems with their relationships. The percentage of patients who were sexually active or

had had previous sexual experience was 83.3%; 58.3% of these had disease-related sexual problems. Hill *et al*<sup>[3]</sup> studied 58 adults an average of 14.5 years after the diagnosis of juvenile RA. They found that two thirds had mild to moderate disease, good sexual adjustment and "normal" educational achievement, employment history and lifestyle. One third had severe disease, often with progressive disability; this did not prevent sexual activity but caused some limitations.

A possible explanation of these differences between young and adult patients could be by the fact that JIA manifests in childhood before the establishment of definite links, relationships, and complete growth. Thus, these children are able and have the opportunity and possibility to learn and build up new strategies and developmental mechanisms, such as alternative movements, gestures, and sexual positions, indicating better adaptive skills related to their new reality and life aspects, including sexual functioning<sup>[19]</sup>.

In contrast with this theory, Foster *et al*<sup>[21]</sup> evaluated quality of life (QOL) in adults with JIA, and they found that the SF-36 scores for bodily pain, general health, physical functioning, vitality, emotion, and social isolation were significantly worse in patients compared with controls, and this trend increased with increasing age of the patients and disease duration. Another important question is whether or not there is any difference between patients with early RA compared with RA patients with long-standing disease. Karlsson *et al*<sup>[22]</sup>, found that patients with early RA were less satisfied with life as a whole at disease onset compared to patients with long standing disease. Patients with early RA also reported low levels of satisfaction with self-care activities, work and sexual life. Women reported that they were more satisfied than men. Notably, women report themselves as less satisfied with sexual life after two years of disease duration. Women with long-standing disease report even lower levels of satisfaction. No correlation was found between disease activity variables and satisfaction with life as a whole. There were, however, positive correlations between disease activity and both satisfaction with partnership and with family life after two years. In patients with early RA compared with those who have chronic RA, the early intervention in addition to the modern early pharmacological treatment practiced today will hopefully lead to a higher degree of life satisfaction.

On the other hand, it is recognized that androgenic status could be related to sexual function. However, hypogonadism or testicular dysfunctions do not necessarily reduce sexual activity. In a study by Gordon *et al*<sup>[4]</sup>, it was shown that RA can cause hypogonadism with sexual dysfunction such as impotence and decreased libido.

## IMPACT OF PHYSICAL AND PSYCHOLOGICAL VARIABLES IN SEXUAL FUNCTION IN RA PATIENTS

The two main sexual problems experienced in RA pa-

tients are: difficulties in performing sexual intercourse (sexual disability); and diminished sexual drive, reflected in both diminished desire and satisfaction.

Hill *et al*<sup>[23]</sup> found that 56% of RA patients reported that arthritis placed limitations on sexual intercourse mainly due to fatigue and pain. It has been shown that when the hip joint is severely affected, total hip replacement improves sexual disability to pre-disease levels in 50% of sexually active patients with RA<sup>[24]</sup>. On the other hand, diminished sexual drive is manifested by a decrease in desire in 50%-60% of RA patients, reduced frequency of intercourse in up to 73% of patients, increase in aversion to sexual interactions, and diminished sexual satisfaction over time compared to pre-disease levels<sup>[11,15,16]</sup>.

Elst *et al*<sup>[25]</sup> showed that 50% of patients with RA lost sexual interest during the course of their disease and 60% were dissatisfied with quality of their sex life. However, Ostensen *et al*<sup>[26]</sup>, in a study of patients with history of juvenile chronic arthritis (JCA), showed that in the younger age group and patients with inactive or less active disease, sexual activity and frequency of intercourse was not different from healthy, age-matched controls. Furthermore, female patients who shared characteristics of marital status with their healthy counterparts showed a similar attitude to sexual activity.

Other studies attributed sexual problems in RA to psychological variables such as depression, altered body image, and worries about partner interest<sup>[2,10-14]</sup>.

Moreover, it has been found that in healthy females, anxiety is associated with reduced frequency of intercourse, whereas depression is an important factor in both loss of libido and loss of sexual satisfaction<sup>[13,14]</sup>.

Kraaiaat *et al*<sup>[5]</sup> found that physical disability, pain, and depression all contribute to the intrusiveness of RA on sexuality. Gutweniger *et al*<sup>[27]</sup> found that morning stiffness in female RA patients plays an important role in their feelings of being a handicap. Female RA patients with a high degree of morning stiffness also had significantly more worries about body image and experienced more sexual dissatisfaction than females with lower degrees of morning stiffness.

Recently, Abdel-Nasser *et al*<sup>[28]</sup> studied 52 female patients with RA. They found that 32 patients had difficulties in sexual performance including 9 patients who were totally unable to engage in sexual intercourse because of arthritis. More than 60% of female RA patients experienced variable degrees of sexual disability and diminished sexual desire and satisfaction. Difficulties in sexual performance were related more to disability and hip involvement, while diminished desire and satisfaction were influenced more by perceived pain, age and depression. They also found that 27% of their patients had genital tract abnormalities that could influence sexual performance. However, these abnormalities can be easily controlled by prompt gynecological referral.

In another recent study, van Berlo *et al*<sup>[18]</sup> found that male patients felt less sexual desire, and female patients masturbated and fantasized less than controls. Differ-

ences in satisfaction were not found. Male and female patients did not experience more sexual problems than controls. Up to 41% of the men, and up to 51% of the women have troubles with several joints during sexual activities. Medications influencing ejaculation in men correlated with distress with orgasm.

Finally, El Miedany *et al*<sup>[29]</sup> showed that among 231 rheumatoid arthritis patients included, 49/91 (53.8%) men and 64/140 (45.7%) women reported sexual dysfunction. Erectile dysfunction in men, and problems with orgasm, arousal, and satisfaction in women, were the most prevalent manifestations.

---

## IMPACT OF RA IN COUPLE'S RELATIONSHIP

---

Majerovitz *et al*<sup>[30]</sup>, when the relationship between functional disability and sexual satisfaction for both rheumatic disease patients and their spouses was examined and their levels of sexual satisfaction to those of healthy comparison couples were compared, found that rheumatic disease and comparison couples did not differ in sexual dissatisfaction. However, greater functional disability was related to greater sexual dissatisfaction for patients and spouses.

Bermas *et al*<sup>[31]</sup>, in a cross-sectional survey of 79 persons with RA and 78 spouses, correlated their marital satisfaction. They found that patients and spouses were generally satisfied with their marriages. Moreover, it was showed that lower marital satisfaction in patients was associated with higher education level, patient's greater use of escape into fantasy, patient's greater use of finding blame, and spouse's higher use of escape into fantasy. Spouses less satisfied with their marriages were more likely to use passive acceptance and less likely to find blame. Female spouses were less likely to be satisfied in their marriages than male spouses. They concluded that certain passive coping styles, more highly educated patients and female spouses are associated with lower marital satisfaction in persons with RA and their spouses.

Kraaiaat *et al*<sup>[5]</sup> studied whether physical disability, pain, depressive mood, and criticism by the spouse are differentially related to intrusiveness of RA on sexuality in male and female patients. They found that physical disability, pain, and, to a lesser extent, depression were found to contribute to intrusiveness of RA on sexuality. However, female patients, compared with male patients, appeared to have lower levels of mobility and self-care. They suggested that differences in sexual motivation between men and women might have been influential in the absence of gender differences in intrusiveness.

---

## TREATMENT RECOMMENDATIONS

---

One of the most important issues about the treatment of sexual dysfunction associated to RA is the fact that neither the sexual functioning is routinely addressed by physicians or health professionals, nor is it part of frequently used

**Table 1** Factors associated to sexual dysfunction in rheumatoid arthritis and recommendations for specific symptoms

Sexual dysfunction	Factors implicated	Recommendations
Sexual disability	Limited mobility	Change position
	Pain, fatigue	Analgesic, heat, and muscle
Dyspareunia	Morning stiffness	Relaxation before activity surgery
	Vaginal dryness	Vaginal lubrication, estrogen cream
Diminished desire	Anxiety, depression	Counseling, antidepressive
Diminished satisfaction	Altered body image	Drugs <sup>1</sup>
Impotence	Hormonal imbalance	Sildenafil, sex therapy

<sup>1</sup>Could decrease libido (Modified from Ref<sup>[33]</sup>).

questionnaires to assess physical function or quality of life. For example, in Europe, United Kingdom health professionals should monitor the sexual activity of RA patients; however, a recent study showed that 66% of RA patients were never asked about the impact of RA on their sexual lives<sup>[23]</sup>. The common problem is communication, so an open communication including inquiry about sexuality in routine care is the first step to improve the situation. To allow the patients to present problems and concerns without embarrassment is also important. After an open communication is achieved, the treatment will depend on the specific patient's symptoms (Table 1). However, there are some general recommendations including: discussion of the problems with the partner, principally about the partner's fear in causing pain or distress during sexual intercourse; exploring different positions; using analgesic drugs, heat, and muscle relaxants before sexual activity in order to decrease pain; exploring alternative methods of sexual expression; and physiotherapy<sup>[32-34]</sup>.

## CONCLUSION

Sexual function in patients with rheumatoid arthritis has not been well studied. There are not enough studies comparing sexual functioning between RA patients and healthy controls and the impact of treatments usually used in RA in improving sexual function.

## REFERENCES

- Ostlere LS, Harris D, Sweny P, Rustin MH. Kaposi's sarcoma following renal transplantation. *Int J Dermatol* 1992; **31**: 439-440 [PMID: 1512104 DOI: 10.1016/j.beth2004.01.002]
- Blake DJ, Maisiak R, Koplan A, Alarcón GS, Brown S. Sexual dysfunction among patients with arthritis. *Clin Rheumatol* 1988; **7**: 50-60 [PMID: 3409645 DOI: 10.1007/BF02284057]
- Hill RH, Herstein A, Walters K. Juvenile rheumatoid arthritis: follow-up into adulthood - medical, sexual and social status. *Can Med Assoc J* 1976; **114**: 790-796 [PMID: 1268790]
- Gordon D, Beastall GH, Thomson JA, Sturrock RD. Androgenic status and sexual function in males with rheumatoid arthritis and ankylosing spondylitis. *Q J Med* 1986; **60**: 671-679 [PMID: 3094090]

- Kraaijaat FW, Bakker AH, Janssen E, Bijlsma JW. Intrusiveness of rheumatoid arthritis on sexuality in male and female patients living with a spouse. *Arthritis Care Res* 1996; **9**: 120-125 [PMID: 8970270]
- Prady J, Vale A, Hill J. Body image and sexuality. In: Hill J, ed. *Rheumatology nursing: a creative approach*. Churchill Livingstone: Edinburgh, 1998: 109-124
- Wells D. *Caring for sexuality in health and illness*. Churchill Livingstone: Edinburgh, 2000
- Pitts M. *Sexual health: The psychology of preventative health*. London: Routledge, 1996
- Britto MT, Rosenthal SL, Taylor J, Passo MH. Improving rheumatologists' screening for alcohol use and sexual activity. *Arch Pediatr Adolesc Med* 2000; **154**: 478-483 [PMID: 10807299 DOI: 10.1001/archpedi.154.5.478]
- Ehrlich GE. Social, economic, psychologic, and sexual outcomes in rheumatoid arthritis. *Am J Med* 1983; **75**: 27-34 [PMID: 6660238 DOI: 10.1016/0002-9343(83)90472-2]
- Blake DJ, Maisiak R, Alarcon GS, Holley HL, Brown S. Sexual quality-of-life of patients with arthritis compared to arthritis-free controls. *J Rheumatol* 1987; **14**: 570-576 [PMID: 3625637]
- van Lankveld W, Ruitkamp G, Näring G, de Rooij DJ. Marital and sexual satisfaction in patients with RA and their spouses. *Scand J Rheumatol* 2004; **33**: 405-408 [PMID: 15794200 DOI: 10.1080/03009740410010317]
- Channon LD, Ballinger SE. Some aspects of sexuality and vaginal symptoms during menopause and their relation to anxiety and depression. *Br J Med Psychol* 1986; **59** (Pt 2): 173-180 [PMID: 3730319 DOI: 10.1111/j.2044-8341.1986.tb02682.x]
- Frohlich P, Meston C. Sexual functioning and self-reported depressive symptoms among college women. *J Sex Res* 2002; **39**: 321-325 [PMID: 12545415 DOI: 10.1080/00224490209552156]
- Yoshino S, Uchida S. Sexual problems of women with rheumatoid arthritis. *Arch Phys Med Rehabil* 1981; **62**: 122-123 [PMID: 7235896]
- Bhadoria S, Moser DK, Clements PJ, Singh RR, Lachenbruch PA, Pitkin RM, Weiner SR. Genital tract abnormalities and female sexual function impairment in systemic sclerosis. *Am J Obstet Gynecol* 1995; **172**: 580-587 [PMID: 7856689 DOI: 10.1016/0002-9378(95)90576-6]
- Areskoug-Josefsson K, Oberg U. A literature review of the sexual health of women with rheumatoid arthritis. *Musculoskeletal Care* 2009; **7**: 219-226 [PMID: 19242923 DOI: 10.1002/msc.152]
- van Berlo WT, van de Wiel HB, Taal E, Rasker JJ, Weijmar Schultz WC, van Rijswijk MH. Sexual functioning of people with rheumatoid arthritis: a multicenter study. *Clin Rheumatol* 2007; **26**: 30-38 [PMID: 16508697 DOI: 10.1007/s10067-006-0216-3]
- de Avila Lima Souza L, Gallinaro AL, Abdo CH, Kowalski SC, Suehiro RM, da Silva CA, Goldenstein-Schainberg C. Effect of musculoskeletal pain on sexuality of male adolescents and adults with juvenile idiopathic arthritis. *J Rheumatol* 2009; **36**: 1337-1342 [PMID: 19411396 DOI: 10.3899/jrheum.080867]
- Packham JC, Hall MA, Pimm TJ. Long-term follow-up of 246 adults with juvenile idiopathic arthritis: predictive factors for mood and pain. *Rheumatology* (Oxford) 2002; **41**: 1444-1449 [PMID: 12468828 DOI: 10.1093/rheumatology/41.12.144]
- Foster HE, Marshall N, Myers A, Dunkley P, Griffiths ID. Outcome in adults with juvenile idiopathic arthritis: a quality of life study. *Arthritis Rheum* 2003; **48**: 767-775 [PMID: 12632431 DOI: 10.1002/art.10863]
- Karlsson B, Berglin E, Wällberg-Jonsson S. Life satisfaction in early rheumatoid arthritis: a prospective study. *Scand J Occup Ther* 2006; **13**: 193-199 [PMID: 17042467 DOI: 10.1080/11038120500462337]
- Hill J, Bird H, Thorpe R. Effects of rheumatoid arthritis on sexual activity and relationships. *Rheumatology* (Oxford) 2003;

- 42: 280-286 [PMID: 12595623 DOI: 10.1093/rheumatology/keg079]
- 24 **Yoshino S**, Fujimori J, Morishige T, Uchida S. Bilateral joint replacement of hip and knee joints in patients with rheumatoid arthritis. *Arch Orthop Trauma Surg* 1984; **103**: 1-4 [PMID: 6466058 DOI: 10.1007/BF00451311]
- 25 **Elst P**, Sybesma T, van der Stadt RJ, Prins AP, Muller WH, den Butter A. Sexual problems in rheumatoid arthritis and ankylosing spondylitis. *Arthritis Rheum* 1984; **27**: 217-220 [PMID: 6696775 DOI: 10.1002/art.1780270214]
- 26 **Ostensen M**, Almberg K, Koksvik HS. Sex, reproduction, and gynecological disease in young adults with a history of juvenile chronic arthritis. *J Rheumatol* 2000; **27**: 1783-1787 [PMID: 10914869]
- 27 **Gutweniger S**, Kopp M, Mur E, Günther V. Body image of women with rheumatoid arthritis. *Clin Exp Rheumatol* 1999; **17**: 413-417 [PMID: 10464550]
- 28 **Abdel-Nasser AM**, Ali EI. Determinants of sexual disability and dissatisfaction in female patients with rheumatoid arthritis. *Clin Rheumatol* 2006; **25**: 822-830 [PMID: 16521053 DOI: 10.1007/s10067-005-0175-0]
- 29 **El Miedany Y**, El Gaafary M, El Aroussy N, Youssef S, Ahmed I. Sexual dysfunction in rheumatoid arthritis patients: arthritis and beyond. *Clin Rheumatol* 2012; **31**: 601-606 [DOI: 10.1007/s10067-011-1891-2]
- 30 **Majerovitz SD**, Revenson TA. Sexuality and rheumatic disease: the significance of gender. *Arthritis Care Res* 1994; **7**: 29-34 [PMID: 7918723 DOI: 10.1002/art.1790070107]
- 31 **Bernas BL**, Tucker JS, Winkelman DK, Katz JN. Marital satisfaction in couples with rheumatoid arthritis. *Arthritis Care Res* 2000; **13**: 149-155 [PMID: 14635288]
- 32 **Panush RS**, Mihailescu GD, Gornisiewicz MT, Sutaria SH, Wallace DJ. Sex and arthritis. *Bull Rheum Dis* 2000; **49**: 1-4 [PMID: 11126624]
- 33 **Tristano AG**. The impact of rheumatic diseases on sexual function. *Rheumatol Int* 2009; **29**: 853-860 [PMID: 19152092 DOI: 10.1007/s00296-009-0850-6]
- 34 **Josefsson KA**, Gard G. Women's experiences of sexual health when living with rheumatoid arthritis--an explorative qualitative study. *BMC Musculoskelet Disord* 2010; **11**: 240 [PMID: 20950461 DOI: 10.1186/1471-2474-11-240]

**P- Reviewers:** Garip Y, Ravindran V, Wang F   **S- Editor:** Wen LL  
**L- Editor:** O'Neill M   **E- Editor:** Lu YJ





百世登

**Baishideng**®

Published by **Baishideng Publishing Group Co., Limited**

Flat C, 23/F., Lucky Plaza, 315-321 Lockhart Road,

Wan Chai, Hong Kong, China

Fax: +852-65557188

Telephone: +852-31779906

E-mail: [bpgoffice@wjgnet.com](mailto:bpgoffice@wjgnet.com)

<http://www.wjgnet.com>

