

Impact of Uveitis on Quality of Life: a Prospective Study from a Tertiary Referral Rheumatology-Ophthalmology Collaborative Uveitis Center (ID 56608)

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Background: Non-infectious uveitis (NIU) leads to severe visual impairment, potentially impacting on health-related quality of life (QoL). The aim of the present study was to investigate the impact of NIU on QoL.

Methods: Eighty NIU patients and 23 healthy controls completed the 36-item Short-Form Health Survey (SF)-36. The SF-36 values were statistically analyzed to evaluate differences between patients and healthy controls and to identify correlations between SF-36 subscores and clinical/demographic data.

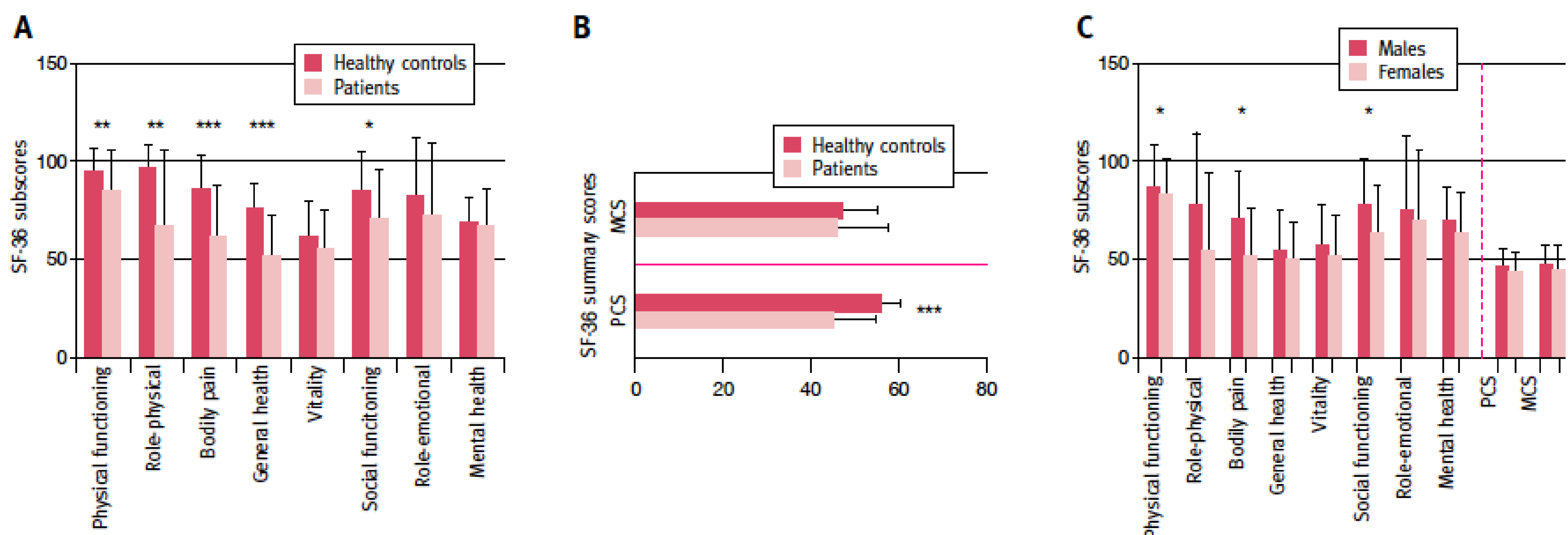
Results: NIU patients showed a decrease in the physical component summary score ($P < 0.0001$) compared to healthy controls, while no difference was highlighted in the mental component summary score ($P = 0.97$). NIU patients showed a decrease in physical functioning ($P = 0.008$), role-physical ($P = 0.003$), bodily pain ($P = 0.0001$), general health ($P < 0.0001$) and social functioning ($P = 0.01$). Physical functioning was lower in patients with acute anterior uveitis (AAU) than in those with panuveitis ($P = 0.003$). No differences were found between patients with bilateral or unilateral NIU, isolated NIU or NIU associated with systemic diseases and with or without ocular activity. No correlations were identified between best-corrected visual acuity and SF-36 subscores. Physical functioning ($P = 0.02$), bodily pain ($P = 0.004$) and social functioning ($P = 0.02$) were reduced in males versus females.

Table 1. Clinical and therapeutic data from patients enrolled in the study. Biologic agents include both tumor necrosis factor and interleukin-1 inhibitors

	N (%)	Oral corticosteroids, n (%)	DMARDs, n (%)	Biologic Agents, n (%)
Location of uveitis				
Anterior	31 (38.8)	11 (35.5)	10 (32.3)	10 (32.3)
Intermediate	2 (2.5)	0 (0)	2 (100)	2 (100)
Posterior	8 (10)	5 (62.5)	3 (37.5)	0 (0)
Panuveitis	39 (48.8)	37 (94.9)	23 (59)	20 (51.3)
Systemic diagnosis				
Idiopathic uveitis	27 (33.8)	4 (14.8)	2 (7.4)	1 (3.7)
Behçet's disease	45 (56.3)	45 (100)	34 (75.6)	26 (57.8)
Ankylosing spondylitis	5 (6.3)	2 (40)	0 (0)	3 (60)
Psoriatic arthritis	2 (2.5)	2 (100)	2 (100)	1 (50)
Vogt Koyanagi Harada disease	1 (1.3)	0 (0)	0 (0)	1 (100)
Additional eye information				
Retinal vasculitis	8 (10)	6 (75)	6 (75)	6 (75)
Monolateral involvement	41 (51.2)	22 (53.7)	12 (29.3)	10 (24.4)
Bilateral involvement	39 (48.8)	31 (79.5)	26 (66.7)	22 (56.4)
Patients with ocular flares at SF-36 fulfillment	16 (20)	11 (68.8)	9 (56.3)	5 (31.3)
Patients with ocular flares during the previous 12 months	31 (38.8)	18 (58)	15 (48.4)	10 (32.3)

DMARDs = disease modifying anti-rheumatic drugs, SF-36 = 36-item Short-Form Health Survey

Figure 1. Short Form (SF)-36 subscores [A] and summary scores [B] assessed in patients and healthy controls. Differences between male and female patients are also pointed out [C]



PCS = physical component summary, MCS = mental component summary

* $P < 0.05$, ** $P < 0.001$, *** $P \leq 0.0001$

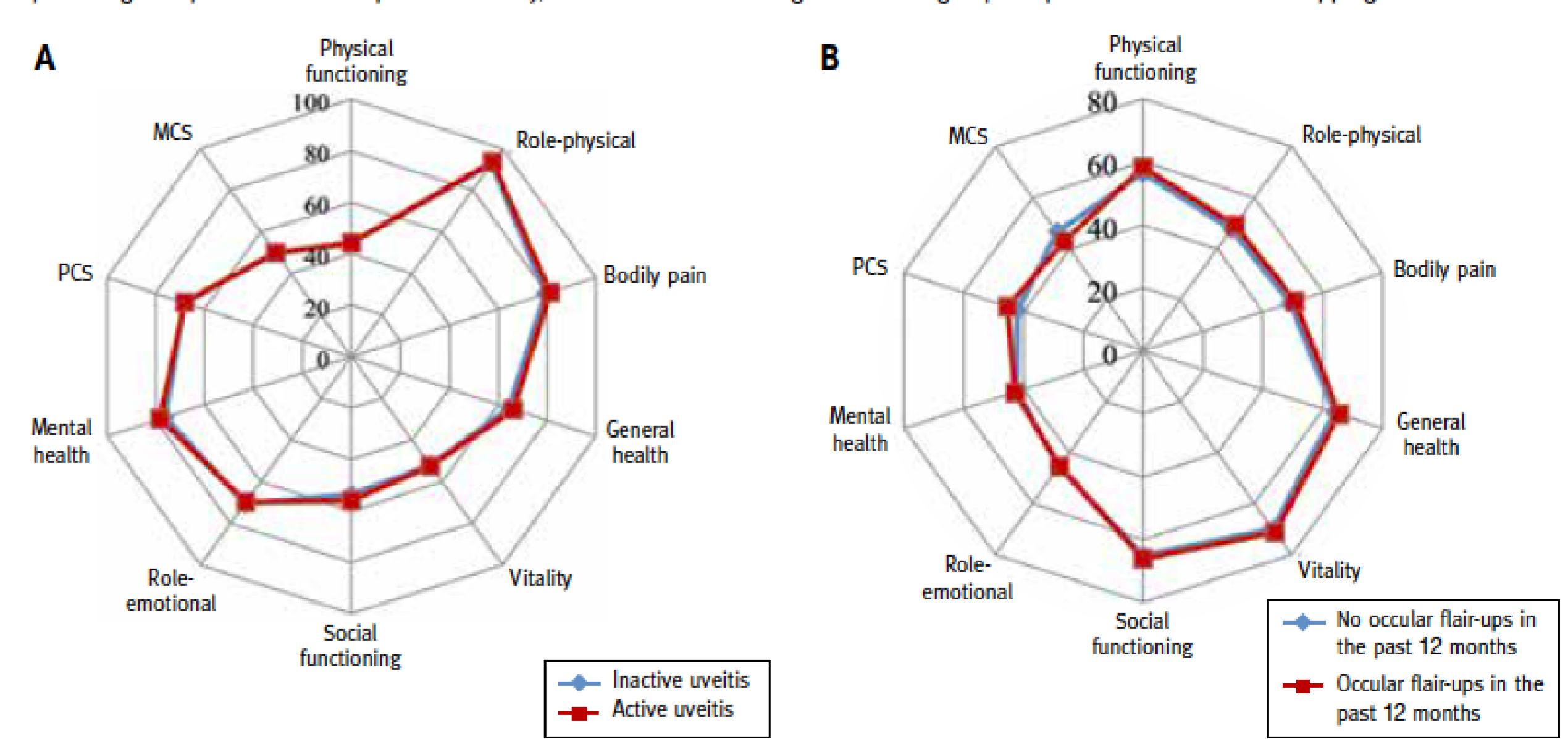
Table 2. Rank correlation coefficients assessing the correlation between demographic, clinical or instrumental data and Short-Form 36 summary scores/subscores

		Physical functioning	Role-physical	Bodily pain	General health	Vitality	Social functioning	Role-emotional	Mental health	PCS	MCS
Age	Rho	-0.32	-0.20	-0.14	-0.15	0.05	-0.13	-0.18	0.1	-0.29	0.03
	P value	0.03	0.09	0.24	0.17	0.66	0.42	0.1	0.38	0.03	0.92
Age at onset	Rho	-0.09	-0.14	-0.06	-0.04	0.006	-0.17	-0.17	0.07	-0.12	-0.004
	P value	0.43	0.23	0.64	0.77	0.96	0.15	0.14	0.55	0.31	0.97
Disease duration	Rho	-0.23	-0.08	-0.1	-0.12	0.08	0.12	0.03	0.08	-0.23	0.13
	P value	0.05	0.48	0.39	0.31	0.52	0.33	0.82	0.4925	0.047	0.29
BCVA	Rho	-0.12	0.07	-0.02	0.04	-0.06	0.004	-0.14	-0.03	-0.004	-0.02
	P value	0.19	0.41	0.83	0.68	0.55	0.96	0.16	0.72	0.96	0.79
CMT	Rho	0.21	0.35	0.25	0.19	0.25	0.26	0.30	0.17	0.22	0.32
	P value	0.03	0.0002	0.009	0.054	0.009	0.006	0.002	0.09	0.02	0.0009

Coefficients were obtained with Spearman's or Pearson's test according to data distribution.

BCVA = best corrected visual acuity, CMT = central macular thickness, PCS = physical component summary, MCS = mental component summary

Figure 2. Radar charts representing mean values of Short Form-36 QoL subscores and summary scores between [A] patients with and without active uveitis at the writing-out of the questionnaire and [B] patients with and without ocular inflammatory activity during the 12 months preceding the questionnaire completion. Notably, the two lines describing the two subgroups of patients are almost overlapping in both cases.



PCS = physical component summary, MCS = mental component summary

Conclusions: QoL is impaired in individuals with NIU, particularly in the physical domains, general health, and social functioning. AAU affects physical functioning more than panuveitis. NIU seems to affect per se QoL disregarding inflammatory activity, visual impairment and presence of associated systemic diseases.