Clinical features and risk factors of active tuberculosis in patients with Behçet's disease

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Backgrounds

Understanding the clinical features and risk factors of active tuberculosis (ATB) in Behçet's disease (BD) patients is of great importance. However, related studies are limited.

Methods

The flow chart of this retrospective case-control study is shown in Figure 1.

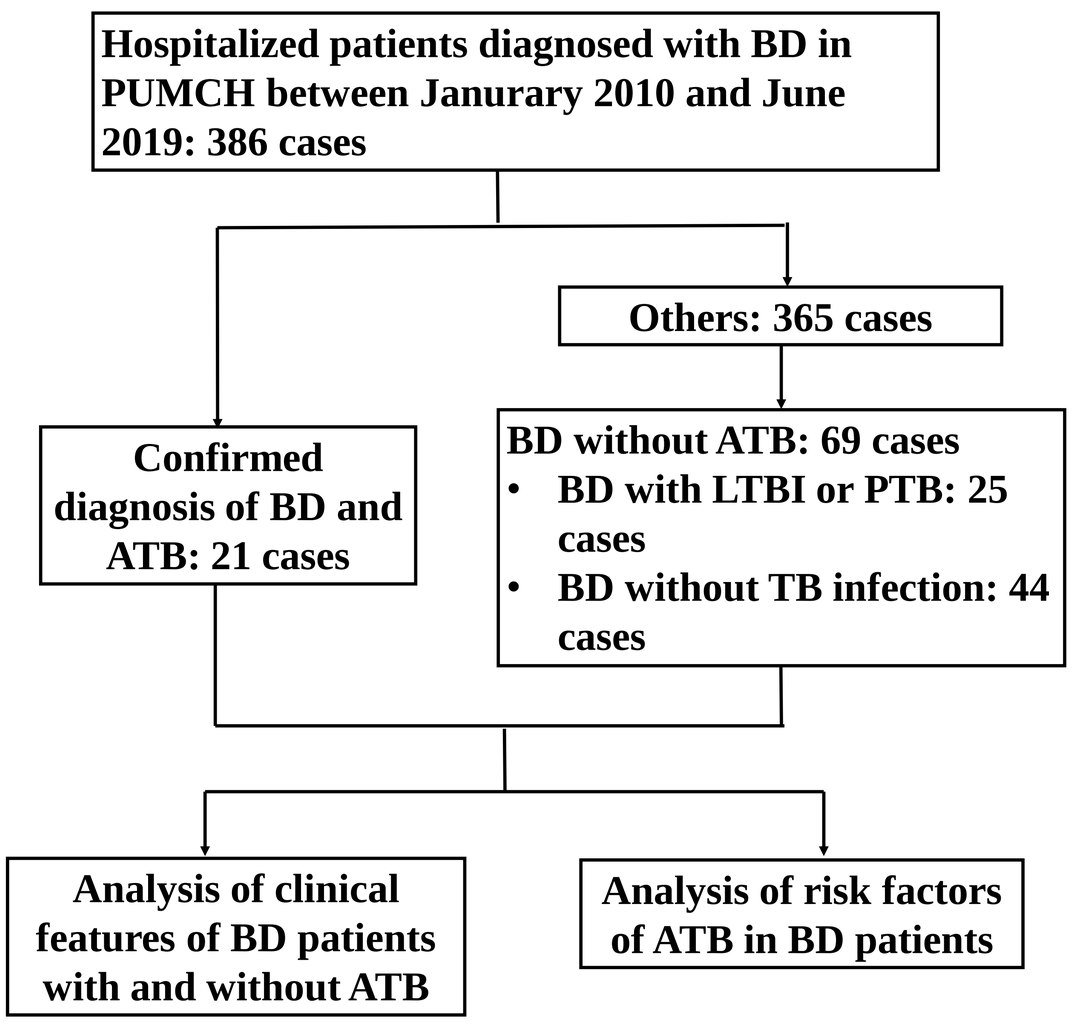

Figure 1. Flow chart of the study process

Table 2. Potential risk factors for ATB in BD patients

	b	SE(b)	Wald	p	OR (95% CI)
ESR (mm/h)					
0-20			**4.658**	**0.097**	
20-60	**1.719**	**0.965**	**3.178**	**0.075**	**5.581 (0.843, 36.960)**
＞60	**2.618**	**1.287**	**4.141**	**0.042**	**13.710 (1.101, 170.702)**
IgG (g/L)	**0.204**	**0.104**	**3.876**	**0.049**	**1.226 (1.001, 1.502)**
T-SPOT.TB (SFC/10^6PBMC)					
0-24			**9.266**	**0.010**	
24-200	**2.076**	**0.921**	**5.084**	**0.024**	**7.793 (1.312, 48.464)**
＞200	**2.874**	**0.998**	**8.288**	**0.004**	**17.705 (2.503, 125.260)**

Results

BD patients with ATB were more likely to have a history or chest CT signs of previous tuberculosis, and a shorter duration of previous glucocorticoids (GCS). ATB patients were prone to have systemic symptoms (fever, cough, expectoration, and night sweating) and/or the symptoms related to the infection sites. The increase of inflammatory markers and T-SOPT.TB was more prominent in ATB patients (Table 1). Logistic regression indicates that significantly increased ESR, IgG, and T-SPOT.TB might be the risk factors of ATB in BD patients.

Table 1. Clinical features of BD patients with and without ATB

	BD with ATB (n=21)	BD without ATB (n=69)	P
Sex (male, %)	13 (61.90%)	35 (50.72%)	0.369
Age (M±SD)	36.19 ± 12.46	38.58 ± 12.68	0.450
Past medical history			
Evidence of PTB (%)	13 (61.90%)	17 (24.64%)	0.002
Previous treatment of BD			
Maximal dosage of GCS (mg/d, median, IQR)	0 (0, 50)	25 (0, 60)	0.093
Duration of GCS (months, median, IQR)	0 (0, 3.5)	3 (0, 13)	0.028
Current treatment of BD			
GCS dosage (mg/d, median, IQR)	0 (0, 15)	5 (0, 32.5)	0.177
Symptoms related to TB infection			
Fever (%)	18 (85.7%)	34 (49.3%)	0.003
Cough (%)	8 (38.1%)	5 (7.2%)	0.002
Expectoration (%)	7 (33.3%)	3 (4.3%)	0.001
Night sweating (%)	8 (38.1%)	4 (5.8%)	0.001
Weight loss (%)	13 (61.9%)	28 (40.6%)	0.086
Laboratory tests			
ESR (mm/h, median, IQR)	31 (22, 57)	16 (6, 39)	0.004
hsCRP (mg/L, median, IQR)	28.32 (8.50, 63.83)	10.37 (1.61, 43.59)	0.038
IgG (g/L, median, IQR)	12.55 (9.98,15.61)	9.6 (7.84,13.13)	0.006
Positive T-SPOT.TB (%)	17 (80.95%) (n=19)	19 (27.54%) (n=66)	0.000
T-SPOT.TB value (SFC/10^6PBMC, median, IQR)	336 (92, 1084)	0 (0, 27)	0.000

Conclusion

When BD patients have fever, night sweating, unexplained weight loss, or manifestations rarely occurred in BD, the diagnosis of ATB should be considered. Significantly elevated T-SPOT.TB indicates a high risk of ATB in BD patients.