

1 Supplemental table 1. The comparison of patient characteristics between the patients with and without rheumatic disease.

		Autoimmune		<i>P</i> value
		rheumatic disease	Control group	
		group	group	
		<i>n</i> = 31	<i>n</i> = 58	
Age, years, median (IQR)		61 (47–71)	69.5 (56–78)	0.08
Sex, female (%)		22 (71)	25 (43)	0.02*
Body weight, kg, median (IQR)		46 (38–56)	56 (47–62)	0.008**
History of abdominal surgery, <i>n</i> (%)		7 (23)	17 (29)	0.62
Interstitial lung disease, <i>n</i> (%)		7 (23)	0 (0)	<0.001**
Chronic kidney disease, <i>n</i> (%)		12 (39)	12 (21)	0.08
Diabetes mellitus, <i>n</i> (%)		10 (32)	10 (17)	0.11
Dosage of PSL at diagnosis of CTD, mg/day, median (IQR)		30 (10–40)	0 (0–0)	<0.001**
Dosage of PSL at perforation, mg/day, median (IQR)		19.5 (10.8–40)	0 (0–0)	<0.001**
Immunosuppressive agents at perforation, <i>n</i> (%)		14 (45)	1 (2)	<0.001**
NSAIDs at the time of perforation, <i>n</i> (%)		4 (13)	4 (7)	0.43
Absence of abdominal pain at perforation, <i>n</i> (%)		26 (84)	57 (98)	0.02*
White blood cell count, / $\mu$ l, median (IQR)		9600 (6600–14000)	8300 (4700–12875)	0.36
Lymphocyte count, / $\mu$ l, median (IQR)		445 (264–938)	590 (431–1118)	0.08
Haemoglobin, g/dL, median (IQR)		9.7 (8.5–11.7)	12.3 (10.5–14.6)	<0.001**
Albumin, g/dL, median (IQR)		2.5 (2.2–3.0)	2.85 (2.3–3.6)	0.19
Lactate dehydrogenase, IU/L, median (IQR)		234 (176–397)	196 (166.25–274.5)	0.07
Blood urea nitrogen, mg/dL, median (IQR)		20 (14–39)	20 (14–37.25)	0.86
Serum creatinine, mg/dL, median (IQR)		0.74 (0.41–1.46)	0.835 (0.64–1.7)	0.12
Amylase, IU/L, median (IQR)		89 (61–296)	57 (41–96)	0.006**
Plasma sodium, mmol/L, median (IQR)		136 (131–140)	138 (135–141)	0.13
Plasma potassium, mmol/L, median (IQR)		3.9 (3.5–4.5)	4.05 (3.65–4.525)	0.84
CRP, mg/dL, median (IQR)		7.4 (3.4–21.1)	15.25 (3.9–21.1)	0.71
IgG, g/dL, median (IQR)		951 (680–1297)	N/A	N/A
Cause of perforation	Diverticulitis, <i>n</i> (%)	14 (45)	22 (38)	0.65
	Autoimmune rheumatic diseases, <i>n</i> (%)	4 (13)	1 (2)	0.048*
	Malignancy, <i>n</i> (%)	3 (10)	14 (24)	0.16
	Ischemia, <i>n</i> (%)	0 (0)	6 (10)	0.09
	Unknown, <i>n</i> (%)	10 (32)	15 (26)	0.62
Perforation location	Ileum, <i>n</i> (%)	5 (16)	8 (14)	0.76
	Appendix, <i>n</i> (%)	3 (10)	5 (9)	1.00

	Colon, <i>n</i> (%)	22 (71)	40 (69)	1.00
	Rectum, <i>n</i> (%)	3 (10)	4 (7)	0.69
	Elective operation, <i>n</i> (%)	1 (3)	1 (2)	1.00
	Emergent operations, <i>n</i> (%)	30 (97)	57 (98)	1.00
Operations	Colostomy, <i>n</i> (%)	12 (39)	14 (24)	0.22
	Hartmann's operation, <i>n</i> (%)	12 (39)	20 (34)	0.82
	Resection, <i>n</i> (%)	4 (13)	16 (28)	0.18
	Appendectomy, <i>n</i> (%)	1 (3)	6 (10)	0.41
	Drainage for perforation and omental flap, <i>n</i> (%)	2 (6)	1 (2)	0.28
	Simple closure, <i>n</i> (%)	0 (0)	2 (3)	0.54
	PMX–DHP, <i>n</i> (%)	14 (45)	22 (38)	0.65
	Methylprednisolone pulse therapy after LIPs, <i>n</i> (%)	0 (0)	0 (0)	N/A
	Dosage of GCs after LIPs, mg/day, median (IQR)	15 (10–40)	0 (0–0)	<0.001**
	Immunosuppressive agents after LIPs, <i>n</i> (%)	0 (0)	0 (0)	N/A
	Days in ICU, median (IQR)	7 (2.8–13.8)	4.5 (2.8–9)	0.22
	Days of hospitalization, median (IQR)	97 (39–140)	36.5 (22.8–53)	<0.001**
	Dead case, <i>n</i> (%)	11 (35)	4 (7)	0.002**
	The year of surgery, year, median (range)	2009 (2002–2017)	2013 (2010–2017)	<0.001**

1 IQR: interquartile, PSL: prednisolone, NSAIDs: non-steroidal anti-inflammatory drugs, WBC: white blood cell, CRP: C-reactive protein, IgG: immunoglobulin G, N/A: not applicable, PMX–DHP: direct hemoperfusion with polymyxin B immobilized fiber, ICU: intensive care unit.

4 \**P* < 0.05.

5 \*\**P* < 0.01.