



Inflammation in benign prostatic hyperplasia: a 282 patients' immunohistochemical analysis.

Grégoire Robert, Aurélien Descazeaud, Nathalie Nicolaïew, Stéphane Terry, Nanor Sirab, Francis Vacherot, Pascale Maillé, Yves Allory, Alexandre de La Taille

► To cite this version:

Grégoire Robert, Aurélien Descazeaud, Nathalie Nicolaïew, Stéphane Terry, Nanor Sirab, et al.. Inflammation in benign prostatic hyperplasia: a 282 patients' immunohistochemical analysis.: BPH and inflammation. *The Prostate / Prostate Suppl*, 2009, 69 (16), pp.1774-80. 10.1002/pros.21027 . inserm-00440934

HAL Id: inserm-00440934

<https://inserm.hal.science/inserm-00440934>

Submitted on 14 Dec 2009

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Figure 1 : Standard coloration and immunostaining with CD3, CD4, CD8, CD20 and CD163 antibodies on different BPH samples from 3 surgery-derived BPH specimens: from low to high grade inflammation

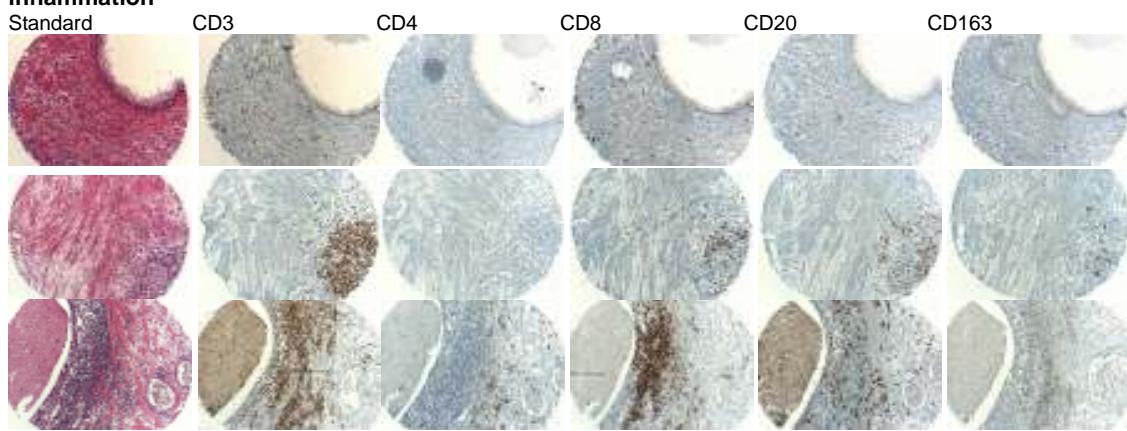


Table 1: Description of the inflammatory infiltrate in 275 patients using cytological or IHC grading

Cytological inflammation grading			IHC inflammation grading		
	Grade	n		Grade	N
lymphocyte	0	63	CD3	0	59
	1	128		1	117
	2	84		2	101
macrophage	0	154	CD4	0	169
	1	121		1	96
polynuclear	0	260	CD8	2	12
	1	15		0	54
atrophy	0	215	CD20	1	135
	1	60		2	89
destruction	0	254	CD163	0	133
	1	21		1	85
fibrosis	0	233		2	57
	1	42		0	51
				1	154
				2	72

IHC : immunohistochemistry

Table 2: Inflammation scores in 275 patients

Cytological inflammation score		IHC inflammation score	
Grade	n	Grade	n
0	47	0	14
1	70	1	16
2	102	2	31
3	45	3	40
4	13	4	41
5	2	5	39
		6	27
		7	32
		8	19
		9	11
		10	5

IHC : immunohistochemistry

Table 3: Frequencies of inflammatory phenotypes expressed by 275 patients on IHC

CD4	CD8	CD20	CD163	n (%)
+	+	+	+	61 (22.2)
-	+	+	-	57 (20.7)
-	+	-	-	42 (15.3)
+	+	-	+	28 (10.2)
-	-	-	+	23 (8.4)
-	-	-	-	14 (5.1)
-	+	-	-	14 (5.1)
-	-	+	+	9 (3.3)
-	+	+	+	8 (2.9)
+	+	-	-	7 (2.5)
+	+	+	-	5 (1.8)
+	-	-	+	3 (1.1)
+	-	-	-	2 (0.7)
+	-	+	+	2 (0.7)

IHC : immunohistochemistry; (-): absence of expression; (+): presence of expression

Table 4: Comparison of clinical parameters between patients with low and high grade inflammation

	All patients		Cytological score			IHC score	
	n=275	Low n=215	High n=60	p	Low n=142	High n=133	p
<i>Quantitative parameter (Student T-test): mean</i>							
Age (year)	70	70	71	0.16	70	70	0.9
PSA (ng/ml)	10.1	9.9	11.4	0.6	9.8	10.6	0.7
Prostate volume (cc)	69	65	85	0.001	64	75	0.02
IPSS	14	13	15	0.8	12	21	0.02
<i>Qualitative parameters (Chi-square test): n (%)</i>							
Open Prostatectomy	105 (38.2)	73 (34.0)	32 (53.3)	0.010	42 (29.6)	63 (47.4)	0.003
Second TURP	22 (8.0)	19 (8.8)	3 (5.0)	0.4	14 (9.9)	8 (6.0)	0.3
No LUTS	31 (11.3)	21 (9.8)	10 (16.7)	0.2	16 (11.3)	15 (11.3)	1.0
Associated PCa	12 (4.4)	7 (3.3)	5 (8.3)	0.1	7 (4.9)	5 (3.8)	0.8
History of biopsies	84 (30.5)	66 (30.7)	18 (30.0)	1.0	34 (23.9)	50 (37.6)	0.018
History of AUR	87 (31.6)	70 (32.6)	17 (28.3)	0.6	49 (34.5)	38 (28.6)	0.3
Phytotherapy	10 (3.6)	8 (3.7)	2 (3.3)	1.0	7 (4.9)	3 (2.3)	0.3
5-ARI	19 (6.9)	13 (6.0)	6 (10.0)	0.3	12 (8.5)	7 (5.3)	0.3
α-blocker therapy	67 (24.4)	54 (25.1)	13 (21.7)	0.7	32 (22.5)	35 (26.3)	0.5

IHC : immunohistochemistry; TURP: trans uretral resection of the prostate ; PCa: prostate cancer; LUTS: lower urinary tract symptoms; AUR: acute urinary retention; 5-ARI: 5 alpha reductase inhibitor

