Psoriasis as a side effect of β blockers

Doctors have been slow to recognise some of the side effects of β blockers in clinical practice. The oculomucocutaneous syndrome induced by practolol was not detected until experience with the drug had totalled one million patient years.¹ The most common cutaneous reactions to β blockers other than practolol include psoriasiform, lichenoid, or eczematous skin reactions.² β Blockade may also trigger true psoriasis.²

We followed the course of psoriasis that had erupted or worsened during β blockade once the β blocking agent was withdrawn.

Patients, methods, and results

Ten patients receiving β blockers whose psoriasis had appeared ($n=6$) or noticeably worsened ($n=4$) during treatment were studied. Four patients showed characteristic nail changes (pitting and onycholysis), and three had joint symptoms. Two had skin lesions typical of palmoplantar psoriasis. The table shows the clinical details of the patients.

The β blocker was withdrawn from all patients except one (case 1), who was given an alternative β blocker because of aggravated anginal pain. In hypertensive patients the β blocker was replaced by calcium antagonists or angiotensin converting enzyme inhibitors, or both, and patients with coronary heart disease were given calcium antagonists and nitrates.

The extent of psoriatic lesions was examined in each patient. Antibodies to serum deoxyribonucleic acid and extractable nuclear antigens were determined, serum protein electrophoresis performed, and blood variables measured. Epicutaneous tests were performed in all cases with a standard basic series and eight different β blockers with 10% β blocker in white soft paraffin. Biopsy samples were also taken for direct immunofluorescence. Control examinations were performed in all patients one, three, six, and 12 months after the β blocker was stopped.

No complications resulted from changing the treatment. Epicutaneous tests gave negative results for both the basic series and the β blockers. Direct immunofluorescence gave negative results. Antinuclear antibodies were not detected, and no changes were found in blood variables or serum proteins.

In four patients (cases 1, 6, 8, and 10) psoriatic skin lesions healed completely after withdrawal of the drug; in case 6, however, the patient still had nail lesions. In all four patients psoriatic lesions had appeared during β blockade. In five others roughly 80% of the psoriatic skin lesions healed. In one patient (case 5) psoriasis recurred fully after 11 months' remission. Healing of nail lesions was almost equally good. In cases 1 and 10 recovery was complete, and in cases 4 and 6 the changes were noticeably reversed. In cases 3 and 4 about 90% of the palmoplantar psoriasis disappeared.

One patient (case 4) was rechallenged after seven months when he received atenolol for four months; psoriasis erupted over the entire body surface within two months.

Comment

β Blockers have been reported to be associated with the recurrence or aggravation of psoriasis.²⁻⁴ Arntzen *et al* found that seven of 23 patients with psoriasis had developed the disease while taking β blockers. The drug was withdrawn in four of the patients, and three of them recovered totally.³ In the present series psoriatic lesions either resolved totally or were noticeably reduced after withdrawal of the β blocker in nine patients; there was one recurrence.

Psoriasis may be an inconvenient side effect of β blockade. We therefore

suggest that β blockers be replaced by alternative treatment whenever safely feasible in all patients where psoriasis has developed or worsened during β blocker treatment.

We thank Professor Kalevi Pyörälä from the department of medicine, Kuopio University Central Hospital, for kindly helping to revise the text and the comment.

- 1 Anonymus. Hazards of non-practolol beta-blockers. [Editorial.] *Br Med J* 1977;i:529-30.
- 2 Hödl S. Nebenwirkungen der Beta-Rezeptorenblocker an der haut. *Z Hautkr* 1983;58:17-28.
- 3 Mobacken H. Cutaneous side-effects from beta-blockers and other antihypertensive agents. *Acta Med Scand* 1979;suppl 628:77-80.
- 4 Hu CH, Miller AC, Peppercorn R, Farber EM. Generalized pustular psoriasis provoked by propranolol. *Arch Dermatol* 1985;121:1326-7.
- 5 Arntzen N, Kavli G, Volden G. Psoriasis provoked by beta-blocking agents. *Acta Derm Venereol (Stockh)* 1984;64:346-8.

(Accepted 11 June 1987)

Department of Internal Medicine, Pieksämäki Regional Hospital, 76100 Pieksämäki, Finland

JAAKKO SAVOLA, MD, chief physician
OUTI VEHVILÄINEN, MD, acting ward physician

Department of Dermatology and Venerology, University of Kuopio, Finland
NIILLO J VÄÄTÄINEN, MD, assistant chief physician

Correspondence to: Dr Savola.

Successful treatment of multiple liver metastases by liver perfusion

The prognosis of patients with liver metastases associated with colorectal cancer is poor: the average survival is about six months, and although there are reports of long term survival, virtually all patients are dead within two years.¹ Wood suggested, however, that although most patients with widespread metastases are dead within two to three years, 16% of those with solitary metastases are alive at five years.²

A recent report suggested that perfusion of the liver with heparin and fluorouracil reduces the development of liver metastases postoperatively.³ We report on a man with multiple tumour deposits in the liver who survived for four years after treatment with perfusion.

Case report

A man of 62 presented with a carcinoma of the right colon. At laparotomy he was noted to have multiple (pin head) tumour deposits in the left lobe of the liver; the right lobe was clear and there were no peritoneal seedlings. A right hemicolectomy was performed (no glands were affected). Subsequent histological examination confirmed secondary adenocarcinoma in the liver. Each lesion was

Clinical details of patients

Case No	Age and sex	Type of psoriasis	Result of biopsy	Treatment triggered or worsened psoriasis	β Blocker taken before study and daily dose	Duration of β blockade before onset or worsening of psoriasis (years)	Other adverse effects	Recovery (%) after β blocker stopped
1	70 F	Psoriasis vulgaris, nail psoriasis	Psoriasis vulgaris	Triggered	Metoprolol 100 mg	0.5	None	100, 100*
2	85 F	Psoriasis vulgaris	Psoriasis vulgaris	Triggered	Propranolol 20 mg	1.0	None	80
3	73 F	Palmoplantar psoriasis	Not done	Triggered	Timolol 10 mg	2.0	None	90
4	56 M	Psoriasis vulgaris, nail psoriasis, palmoplantar psoriasis	Psoriasis vulgaris	Worsened	Atenolol 50 mg	1.5	Ocular changes, dry mouth, arthropathy	80, 50†
5	55 M	Psoriasis vulgaris	Psoriasis vulgaris	Worsened	Metoprolol 200 mg	1.0	Dry mouth, impotence, cold legs	Relapse
6	37 F	Psoriasis vulgaris, nail psoriasis	Psoriasis vulgaris	Triggered	Metoprolol 50 mg	0.3	Arthropathy	100, 50†
7	53 M	Psoriasis vulgaris	Psoriasis vulgaris	Worsened	Propranolol 80 mg	1.0	None	90
8	64 M	Psoriasis vulgaris	Psoriasis vulgaris	Triggered	Propranolol 80 mg, metoprolol 100 mg, atenolol 50 mg	0.5	Arthropathy, dry mouth	100
9	53 M	Psoriasis vulgaris	Psoriasis vulgaris	Worsened	Atenolol 50 mg, pindolol 10 mg	0.5	None	70
10	49 M	Nail psoriasis	Not done	Triggered	Labetalol 100 mg	0.4	None	100

* β Blocker was continued (acebutolol 100 mg/day).

†First figure relates to psoriasis vulgaris, the second to nail psoriasis.

treated by diathermy, and there was no clinical evidence of further deep seated lesions. A cannula was placed in the portal vein through the left gastroepiploic vein, and the liver was perfused with heparin and fluorouracil continued for one week.

At a subsequent laparotomy for a second carcinoma (rectum) seven months later there was no evidence of any tumour in the liver. He remained well during the next four years with no clinical evidence of recurrent tumour and died suddenly from a myocardial infarct. Regular monitoring of carcinoembryonic antigen during the four years always yielded normal results, the concentration three weeks before his death being 5 µg/l (normal 0-9 µg/l). The liver was removed intact at necropsy and fixed in formaldehyde. Whole organ slices at 5 mm intervals did not show any macroscopic tumour deposits; 20 standard histological blocks from all areas of the liver did not show any microscopic evidence of secondary tumours.

Comment

Surgical resection seems to be indicated for single hepatic metastases,⁴ although Finlay and McArdle found that even in these cases surgery should be approached with caution: four of their six patients with single occult metastases (identified by computed tomography) had multiple deposits within six months.⁵ The argument favouring surgical resection is certainly not as convincing when deposits are multiple, even when they are apparently confined to one lobe.

The prognosis for a patient with multiple metastases, even confined to one lobe as with our patient, is very poor, and the chances of a disease free liver after four years are slight. There is some evidence that liver perfusion improves the prognosis of patients, at least those with Dukes's stage B colonic tumours,³ but whether our patient's four year survival can be attributed to the perfusion or to the diathermy is not known. As tumour deposits were visible on the surface of the liver, however, there were probably further tumours in its substance; perfusion of the liver was therefore an important factor helping his survival. This furthers the case for postoperative perfusion of the liver in patients with no obvious metastases but perfusion of the remaining liver after hepatic resection for metastases may also improve the prognosis.

- 1 Taylor I. Colorectal liver metastases—to treat or not to treat? *Br J Surg* 1985;72:511-6.
- 2 Wood CB. Natural history of liver metastases. In: Van den Velde CJH, Sugarbaker PH, eds. *Liver metastases*. Amsterdam: Martinus Nijhoff, 1984:47-54.
- 3 Taylor I, Machin D, Mullee M, et al. A randomised controlled trial of adjuvant portal vein cytotoxic perfusion in colorectal cancer. *Br J Surg* 1985;72:359-63.
- 4 Bradpiece HA, Benjamin HS, Blumgart LH. The role of major hepatic resection for colorectal liver metastases. Abstract F21 from the British Society of Gastroenterology, spring meeting, Lancaster, April 1986. *Gut* 1986;27:A615.
- 5 Finlay IG, McArdle CS. Occult hepatic metastases in colorectal carcinoma. *Br J Surg* 1986;73:732-5.

(Accepted 1 July 1987)

Gastrointestinal Research Unit, Royal Hospital, Wolverhampton WV2 1BT

R H GRACE, MB, FRCS, consultant surgeon
K W M SCOTT, MD, FRCPATH, consultant histopathologist

Correspondence to: Mr Grace.

New technique of blind peritoneal biopsy

Blind peritoneal biopsy is an accepted alternative to direct vision biopsy.¹⁻⁴ Different methods vary in their technical ease, diagnostic accuracy, and incidence of complications. I have used the forward biting fibreoptic endoscopic biopsy forceps for blind peritoneal biopsy during routine abdominal paracentesis and report the results in 18 patients with ascites.

Materials, method, and results

The biopsy equipment comprised a medium size metal cannula and trocar as used for routine abdominal paracentesis (Dawn Surgical Ltd) and the fibreoptic endoscopic biopsy forceps used for taking gastric biopsy specimens at gastroscopy (FB-K1, an accessory to the Olympus P2 gastroscope). The forceps was used without its plastic handle because heat was used for sterilisation instead of ultrasonic autoclaving, which was not available.

The trocar cannula is placed in the peritoneal cavity through the abdominal wall at the right iliac fossa in the conventional way as for abdominal paracentesis. The trocar is then removed and the fluid allowed to drain freely, without tubing, into a collector. As the fluid drains out the closed biopsy forceps is introduced through the cannula and pushed in gently. When resistance is felt, usually after 10-15 cm, it is opened and, with a slight push, closed firmly and gently pulled out. Tissue so obtained is then preserved for histological examination. The forceps is reintroduced through the cannula and, with a slight change in direction, a different site may be sampled. Further specimens may be taken in the same way. After the procedure the trocar is reinserted and both it and the cannula withdrawn. The skin is stitched and dressed and the patient monitored for any immediate or late complications.

I treated seven men and 11 women, all except one of whom were inpatients. Patients with a bleeding tendency were excluded. The consent of the patients and their attending physicians was obtained.

The biopsy procedure was easy and took no more than 10 minutes. It was well tolerated by the patients, needed no premedication, and, apart from the usual discomfort of introducing the paracentesis cannula, there were no immediate or late complications attributable to the procedure. In 15 patients the first attempted biopsy yielded tissue satisfactory for diagnosis; the average size of the specimens was about 1 mm. In the remaining three patients, who were treated early in the series, the specimens were too small. Repeat biopsy in one resulted in a positive diagnosis, raising the success rate to 88.9%. The table summarises the results.

Comment

Previous methods of blind peritoneal biopsy sampling were used mainly in diagnosing tuberculous peritonitis,^{2,4} though the Cope needle improved the diagnosis of malignant peritoneal conditions.⁵ The present method gave a high diagnostic yield for both tuberculosis and malignancy. This may be ascribed to securing large enough samples for histological examination and to the length and pliability of the biopsy forceps, which makes it possible to take multiple samples from different peritoneal sites during the same session without having to repierce the abdominal wall. This improves the diagnosis of malignancy where disease of the peritoneum is patchy. The blades of the forceps are small and the margin sharp, so causing the least trauma and complications.

I recommend this method in patients with ascites and suggest a trial of blind biopsy sampling in other cavities such as large joints, using a trocar cannula and forceps of appropriate size and type.

I thank Professors A K Yassin and T Q Al Dabbagh for advice.

- 1 Donohoe RF, Shnider BI, Gorman J. Needle biopsy of the peritoneum. *Arch Intern Med* 1959;103:739-45.
- 2 Levine H. Needle biopsy of the peritoneum in exudative ascites. *Arch Intern Med* 1967;120:542-5.
- 3 Viranuvatti V, Hitanat S, Boonyapaknavig V, Plengvanit U, Kalayasiri C, Chearani O. Peritoneal biopsy: experience with blind and direct vision biopsy. *American Journal of Proctology* 1966;17:488-92.
- 4 Jenkins PF, Ward MJ. The role of peritoneal biopsy in the diagnosis of ascites. *Postgrad Med J* 1980;56:702-3.
- 5 Trujillo NP, Donohoe RF. Needle biopsy of the peritoneum. *Am J Med Sci* 1965;249:186-9.

(Accepted 10 June 1987)

Department of Medicine, College of Medicine, University of Mosul, Mosul, Iraq

N M QIBI, MRCP, MRCPI, lecturer

Biochemical, cytological, and biopsy results in 18 patients with ascites grouped according to diagnosis

	Cancer	Tuberculosis	Other
No of patients	7	8	3
Mean age in years (range)	55 (30-70)	36 (18-75)	67 (62-75)
Fluid protein	Exudate in 6	Exudate in all	Exudate in all
Fluid cytology for malignant cells	Positive in 3, suspicious in 1	Negative in all	Negative in all
First biopsy result	Malignant in 6	Tuberculosis in all	Fibrinous inflammation in 1, failure in 2
Second biopsy result	Malignant in 1	Not done	Not done