Non-invasive assessment of lower limb arterial disease may be used to select those cases which would be amenable to angioplasty. Clarify four limbs from 40 patients presenting with claudication or critical ischaemia were studied prospectively. Intra-arterial DSA and colour duplex scanning (HDI, ATU) of the femoral and popliteal arteries was performed on all limbs. The iliac vessels were scanned in 12 limbs. In the superficial femoral artery, 28 of 29 occlusions were correctly diagnosed and 19 of 21 stenoses. In the iliac vessels 8 out of 9 significant lesions were correctly detected. In every case the duplex scan was able to predict correctly whether the lesion would be suitable for angioplasty.

 Duplex scanning is a highly accurate, non-invasive means of diagnosing the site and nature of vascular lesions, predicting those patients who would be appropriate for angioplasty. This would reduce the number of patients undergoing unnecessary angiography with its inherent risks and allow for more efficient usage of the angiography suite.

TRANSCRANIAL DOPPLER INVESTIGATIONS IN PATIENTS UNDERGOING CAROTID ENDARTERECTOMY
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Doppler techniques have largely taken over in the preoperative investigations and intraoperative monitoring of patients undergoing carotid endarterectomy (CEA). Doppler scanning is sufficient for the assessment of stenosis prior to surgery except where occlusion or subocclusion is suspected. Fifty-five patients have been investigated using trancranial Doppler (TCD) before and during CEA. In addition stump pressure and internal carotid artery flow (qICA) was measured. There was no correlation between stump pressure and change in middle cerebral artery velocity (Vmca) at the time of clamping (r <0.248). qICA was significantly lower in patients with >90% stenosis but maintained a mean flow of 137 ml/min. There was no significant difference in the fall in Vmca at clamping for patients with different degrees of stenosis. Stump pressure is a poor predictor of Vmca changes due to clamping. Flow through a >90% stenosis contributes significantly to cerebral perfusion. Stump pressure and degree of stenosis should be used with caution in determining the need for intraoperative shunting.

ANGIOSCOPIC: A NEW TOY?
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Angioscopy is becoming a popular new tool in vascular surgery but after initial enthusiasm will it find a place in routine work? The initial combined experience of the BRI and the RUH of using angiography for vein preparation in femoro-popliteal has been collated. Twenty patients have been studied, all have had in situ femoro-popliteal bypass for critical ischaemia. The procedure was performed using the standard groin and popliteal approaches but valve lysis was undertaken under angioscopic control. Side branches were identified by the scope and small incisions made to allow branches to be ligated.

Further work will be undertaken in the two centres to further evaluate this “minimally invasive” technique but from our initial experience angiography is not just a new toy.

RUPTURED ABDOMINAL AORTIC ANEURYSMS ARE THEY SAFE TO TRANSFER?
M. S. Whiteley, C. Irvine, H. A. Everitt, A. Hinchliffe, R. N. Baird, H. Horrocks

Weston General Hospital (W.G.H.) is a district general hospital without a vascular surgical service. It is twenty miles from the Bristol Royal Infirmary (B.R.I.), a teaching hospital with a vascular surgical department. In 1988, a decision was made in Weston General Hospital that all ruptured Abdominal Aortic Aneurysms would, after appropriate resuscitation, be transferred for treatment at the Bristol Royal Infirmary. We have studied the patients presenting to Weston General Hospital between February 1988 and July 1991 with a final diagnosis of ruptured abdominal aortic aneurysm and compared these to patients presenting directly to the Bristol Royal Infirmary. There was no significant difference between the ages, delay in presentation after onset of symptoms, nor length of operation in either group.

| Age (years) | Delay in Presentation (hours) | Time of Operation (hours) |
|-------------|-----------------------------|---------------------------|
| W.G.H. Patients: 72.7 (58-94) | 15.2 hours | 3.0 hours |
| B.R.I. Patients: 73.9 (54-94) | 14.5 hours | 2.9 hours |

Of those patients arriving alive at each hospital, 33% of 36 patients from Weston General Hospital were discharged alive, despite the 26 mile transfer, the same proportion (33% of 61 patients) as those presenting directly to Bristol.

ABSTRACT FOR SUBMISSION TO SOUTH WEST SURGEONS
Surgical Goitre in Childhood and Adolescence: Cytological Aspects and Problems in Management
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Because of the rarity of goitres in childhood and adolescence (0-16 years inclusive), especially malignant lesions, there are difficulties in diagnosis and management. An exceptional papillary carcinoma arising in an 8 year old boy prompted a review of surgical goitres from the Bristol Children's Hospital and Bristol Royal Infirmary.
A 23 year span, from 1967-1989 inclusive, was studied using retrospective data, namely operative theatre records, histopathology and cytology files. The series was first presented in 1990 and has now been updated prospectively for 1990 and 1991. All histopathological (16) and cytological (8) material has been reviewed and re-evaluated.

The yield of patients was small, only 16 investigated and surgically treated goitres, (15 patients) were discovered. The case distribution included: nodular goitre 6; chronic lymphocytic thyroiditis (C.L.T) 3 cases; Riedel’s thyroiditis 1; follicular adenoma 1; non-toxic hyperplasia (pseudo-follicular adenoma) 3 and papillary carcinoma 2.

The follicular problems will be discussed in detail. From this modest sized series significant clinical, operative and cyto-histological difficulty was recorded in 10/16 (62%) of patients. The cytopathology of CLT, non-toxic hyperplasia of childhood and the papillary neoplasms was significant and requires emphasis.

Conclusions are tentative. They are:
(1) The valuable status of fine needle aspiration cytology - under a brief general anaesthesia if necessary - for all goitres.
(2) A need for greater recognition of the prevalence of C.L.T. in this age group.
(3) The value of per-operative frozen section diagnosis in neoplastic cases to influence the extent of surgery.
(4) The exacting ‘borderline diagnosis’ between non-toxic hyperplasia and follicular adenoma.

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THE MYTH OF THE SMALL DISTRICT GENERAL HOSPITAL
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The ever increasing trend towards larger surgical centres with sub-specialisation has recently been encouraged by Politicians, Managers and Royal Colleges.

In practice, the adequately staffed District General Hospital Surgical Department can deal with the majority of cases without referral to Tertiary centres.

In East Somerset, where over 25% of all the Family Doctor referrals are to the General Surgeons, Clinical Audit has confirmed less than one hundred were sent elsewhere.

At present the main reasons for transfer are for expensive high technology therapies which could be provided on a visiting mobile basis for the District Hospitals. Only one person out of 4,800 patients studied was sent elsewhere for diagnosis. The correct provision of on site surgical resources with visiting treatment pantechnovans removes the need for large regional centres and provides an equitable distribution of quality Health Care.

LOCAL RECURRENCE AFTER LOCALLY CURATIVE COLORECTAL CANCER RESECTION
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The published big differences in rates of local recurrence after locally curative resection of colorectal cancer need explaining. If like is being compared with like and the reports are correct, then some surgeons are more successful in eradicating the disease from its primary site than others. One possible source of trouble is exfoliated colorectal cancer cells, which have been shown capable of implantation and growth. Another is failure, in the case of rectal carcinoma, to excise the entire mesorectum.

To illustrate management of both threats the outcome in all local recurrences of rectal cancer treated by locally curative resection between 1985 and 1991 is presented. There were only three local recurrences but even so it is argued that each could have been prevented.

The study suggests that in all except locally palliative resections (when the primary is peeled or finger fractured from irremovable adjacent structures and regrowth would be inevitable) local recurrence after locally curative procedures is an inevitable tragedy. Whether the technique of on-table colonic lavage used by the author to eliminate exfoliated cells in addition to the standard precautions, is necessary to achieve the aim, remains open to debate.

STARTING FEMOROTIBIAL BYPASS IN A DISTRICT HOSPITAL
M. G. Wyatt, L. J. M. T. Tambeur, V. F. M. Kernick, H. Clark, W. B. Campbell
Royal Devon and Exeter Hospital.

Femorobibial bypass is not yet done frequently in many district hospitals, because it is time consuming and the risk of failure is substantial, especially during the learning curve. We have reviewed the early results of a single Consultant Surgeon, and his team.

During 1987-91, 75 femorotibial grafts were performed in 66 patients (43 male, aged 45-93 median 73 years). Indications were ulceration or gangrene in 50, rest pain alone in 17 and severe claudication in 8 cases. Fifty seven grafts were autogenous vein, 14 P.T.F.E., 2 composite, and 2 umbilical vein.

Overall, 19 grafts (25.3%) failed within the first 30 days (2 others were salvaged after occlusion) and 20 amputations were required (5 despite patent grafts). There were 2 early deaths (mortality 2.7%).

At the end of the five year period a total of 37 patients had required amputation (0-21 months, median 1 month after operation), and 18 had died. Nineteen (40% of survivors) were alive with patent grafts.

These disappointing early results were due to an initial technical learning curve, after which increased confidence led to reconstructing patients with inadequate distal arteries.

Latterly, a more selective approach, with extension of operating time to revise imperfect results as required, has produced improved graft patency. Limb salvage can be achieved in a worthwhile proportion of these patients.

IS REGULAR OUTPATIENT FOLLOWUP NECESSARY AFTER ARTERIAL RECONSTRUCTION?
T. Elliott, J. M. Dunn, J. Lavy, A. Bell, V. F. M. Kernick W. B. Campbell.
Royal Devon and Exeter Hospital.

By tradition patients have been reviewed regularly after arterial reconstruction, but Harris1 has suggested that they should be seen only once unless graft surveillance by scanning is indicated. We have always done this, and reviewed a cohort of patients for the effectiveness and acceptability minimal clinic followup.

Patients who had grafts for lower limb ischaemia during 1987-9 were reviewed. There were 173 (116 male; aged 40-95 years, median 71) of whom 48 had proximal and 131 infranigual procedures (some had both), prior to introduction of duplex graft surveillance. During the followup period of 30-66 months 100 patients had died or required amputation. The
remaining 73 were invited for review by examination and structured questionnaire, and 64 (87%) attended.

These patients had a median of 1 postoperative review (range 0-6) which 68% found helpful for reassurance, and only 26% would have preferred another. They had been told to report immediately if concerned, and 27 (42%) had done so. Fourteen (22%) had reoperations. 80% grafts remained patent.

Minimal outpatient followup is acceptable to most patients, and most present if symptoms of graft occlusion develop, provided they have been told to do so. Further routine review should be restricted to appropriate vascular laboratory surveillance of selected grafts.

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Wessex Branch of the Association of Clinical Pathologists

The winter meeting of the Wessex Branch of the Association of Clinical Pathologists was held on 10 December 1992 at the Postgraduate Centre, Southmead Hospital. After the business meeting (President: J D Davies; Secretary: E F Mackenzie; Treasurer: N B N Ibrahim), and a scheduled address by a member of the Executive Committee of the Royal College of Pathologists, the following oral papers were presented by trainee pathologists from the South West Region.

QUANTIFYING THE OCCULT
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An assay based on the fluorescent properties of di-carboxylic porphyrins derived from the haem moiety of haemoglobin was used to quantify blood loss in faeces.

Patients receiving thrombolytic therapy - streptokinase or thromboplasticinogen activator - following myocardial infarction were studied. Haemoglobin levels in random faecal samples were compared with controls, who did not receive thrombolysis, admitted to the CCU during the same time period.

Mean peak measured faecal haemoglobin in the treatment group (n = 36) was 5.09 mg/g stool (SD = 7.50, SE = 1.25) and in the control group (n = 19) was 1.45 mg/g (SD = 1.30, SE = 0.30). The difference was statistically significant (p <0.05). 25/36 (69%) in the treatment group and 2/19 (10.5%) in the control group had levels greater than 2 mg/g, the quoted upper limit of normal, in at least one sample. It is concluded that thrombolytic therapy is associated with increased GI blood loss although in none of the patients studied was the magnitude sufficient to cause haemodynamic compromise.

There are circumstances under which quantitative determination of faecal blood loss should be considered advantageous because of the limited sensitivity and specificity of the traditional, qualitative, guaiac impregnated slide tests. Porphyrin fluorescence analysis is a practical alternative to radioisotopic labelling of red blood cells to achieve this.

ITS A MELANOMA - WHAT MORE DO YOU WANT!
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The potential for metastasis of melanoma can be assessed using clinical and histological prognostic variables and several prognostic models have been developed. The precision of such microstaging depends on the number and power of variables although a few of these such as thickness are sufficiently powerful to be considered as single variables in clinical use.

One hundred histological reports of excision specimens of stage I invasive melanomas from files were analysed to see how often basic histological features were recorded. None of the one hundred reports contained all the relevant histological data. In 15% of the reports there was no comment on the degree of excision. In many of the reports microstage attributes that have been shown to be prognostically important such as mitotic count or ulceration were omitted. A standard method of reporting invasive melanomas is advocated which includes these attributes and will allow some degree of survival probability to be made.

THE DIAGNOSIS OF MYOCARDIAL INFARCTION
Christine A Neil
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Southmead Hospital

This study compared the sensitivity and specificity of various markers used to make the diagnosis of myocardial infarction. 50 patients admitted to a coronary care unit with a history of chest pain had frequent blood samples and ECG's taken during the first 24 hours. The ECGs were read blind by a cardiologist and the venous samples, after being stored at -70C, were analysed for Creatine Kinase, CK-MB, Myoglobin and Troponin-I. A full clinical history was obtained and a record was kept of all tests initiated by the admitting physicians and the diagnosis they reached on the basis of those tests. Data are presented outlining the ECG/biochemical criteria used to make the diagnosis, the misdiagnosis rate and the mortality rate in the different groups. The sensitivity and specificity of the individual markers were reviewed. A control group of 25 patients without chest pain had 6 hourly blood samples and a minimum of 1 ECG during the first 24 hours.

Data are presented on the ability of various markers to detect minor myocardial damage and their possible use as prognostic indicators.

INTERLEUKIN-4 PROLONGS SURVIVAL IN CULTURE OF B CELLS FROM B-CLL PATIENTS: THE ROLE OF APOPTOSIS
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The survival in vitro of peripheral blood (PB) B cells from B-CLL patients was markedly enhanced in the presence of interleukin-4 (IL-4) as measured by apoptotic rate. The mean percentage (range) reduction of cells showing morphological apoptotic changes using acridine orange was 52% (28-77) on the first day, 40% (35-48) on the third and 30% (16-52) on the sixth day of culture with IL-4 and activation (PBW). Similar results were obtained without PWM. No reduction in apoptosis with IL-4 was seen in normal PB B cells. In eight further experiments, apoptosis was measured by incorporation of