the irradiated field of a patient receiving phenytoin should be followed closely and, upon signs of extension, both radiation therapy and phenytoin should be discontinued and high-dose steroids instituted.

1. Rasmussen JE. Causes, diagnosis and management of toxic epidermal necrolysis. *Comprehensive Ther* 1990, **16**, 3–6.
2. Tucker MS, Fitzharris JW. Dilantin induced erythema multiforme major: Report of a case with liver and kidney involvement. *J Am Osteopath Assoc* 1985, **85**, 511–514.
3. Patterson R, *et al.* Erythema multiforme and Stevens–Johnson Syndrome. Descriptive and Therapeutic Controversy. *Chest* 1990, **98**, 331–336.
4. Chan HL, *et al.* The incidence of erythema multiforme, Stevens–Johnson syndrome and toxic epidermal necrolysis. *Arch Dermatol* 1990, **126**, 43–47.
5. Sheretz EF, Jegasothy BV, Lazarus GS. Phenytoin Hypersensitivity reaction presenting with toxic epidermal necrolysis and severe hepatitis. *J Am Acad Dermatol* 1984, **12**, 178–181.
6. Howell WR, Knight AL, Scruggs HJ. Stevens–Johnson syndrome after radiotherapy. *South Med J* 1990, **83**, 681–683.
7. Nawalkha PL, Mathur NK, Malhotra HC. Severe erythema multiforme (Stevens–Johnson syndrome) following telecobalt therapy. *Br J Radiol* 1971, **45**, 768–769.
8. Lowe L, Camiel ML. Exanthem complicating neoplastic disease. *Am J Roentgenol Rad Ther* 1940, **43**, 587–596.
9. Davis J, Pack G. Erythema multiforme following deep X-ray therapy. *Arch Dermatol Syph* 1952, **66**, 41–48.
10. Maiche A, Teerenhovi L. Stevens–Johnson syndrome in patients receiving radiation therapy. *Lancet* 1985, **45**, 8445.
11. Delattre JH, Safai B, Posner JB. Erythema multiforme and Stevens–Johnson syndrome in patients receiving cranial irradiation and phenytoin. *Neurology* 1988, **38**, 194–198.

Eur J Cancer, Vol. 29A, No. 3, p. 479, 1993.
Printed in Great Britain
0964–1947/93 $6.00 + 0.00

Shifts in Respiratory and Upper Digestive Tract Cancer in Eastern Austria

H. Swoboda

In Eastern Austria, from 1960 to 1989, mortality in males from buccopharyngeal cancer (ICD 140–149) rose steadily whereas lung cancer mortality declined, both trends resulting from a double wave shaped cohort effect [1, 2]. The complex site larynx showed only slight cohort-related trends of regional mortality [2]. Cases diagnosed at our institution, however, covering one fourth of regional incidence, suggested a rise of hypopharynx carcinoma and a decrease of laryngeal, especially glottic carcinoma [3]. Age-specific patterns showed similarities between hypopharynx carcinoma and buccopharyngeal cancer, and between larynx carcinoma and lung cancer, respectively [1, 3]. The Eastern Austrian ratio of buccopharynx cancer by lung cancer, in number of deaths, and the hospital-based ratio

Correspondence to H. Swoboda, 1. Universitätsklinik für Hals-, Nasen- und Ohrenkrankheiten, Lazarettgasse 14, A-1090 Wien, Austria.
Received and accepted 29 July 1992.

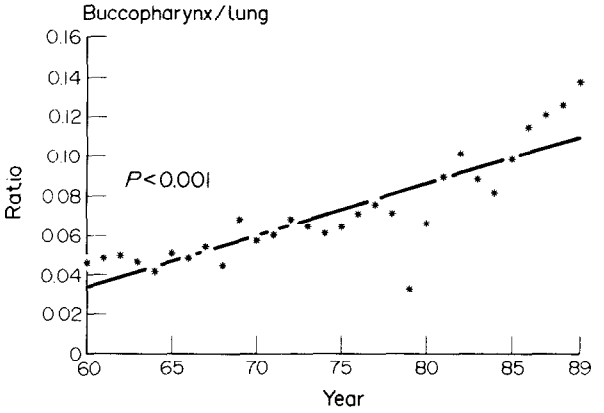

Fig. 1. Ratio of buccopharynx cancer (n = 2805) by lung cancer (n = 40346), males, deaths, Eastern Austria 1960–1989.

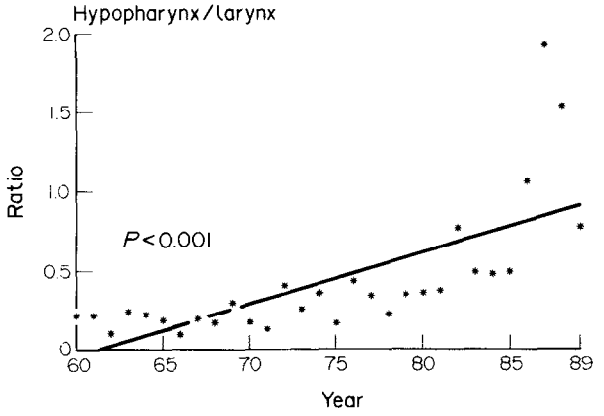

Fig. 2. Ratio of hypopharynx carcinoma (n = 334) by larynx carcinoma (n = 1048), males, Department of Otorhinolaryngology 1, University of Vienna 1960–1989.

of hypopharynx carcinoma by larynx carcinoma, have been increasing continuously (Figs 1 and 2). Thus substituting precise, yet not strictly representative hospital data to regional statistics, strikingly parallel developments emerge: hypopharynx carcinoma resembled buccopharyngeal cancer, and larynx carcinoma resembled lung cancer. Increase obviously did not affect sites of the respiratory tract subject to the classical risk factor of inhalative smoking, but rather affected sites with a more complex aetiological background, notably interactions of tobacco and alcohol [4–6].

1. Swoboda H, Neumann H, Cartellieri M. Zur Epidemiologie bösartiger Neubildungen des Atmungs- und oberen Verdauungstraktes in Ostösterreich. *Laryngo-Rhino-Otol* 1990, **69**, 123–130.
2. Swoboda H. Epidemiology of head and neck cancer in Eastern Austria. In Pfaltz CR, Arnold W, Kleinsasser O, eds. *Bearing of Basic Research on Clinical Otolaryngology. Advances in Otorhinolaryngology.* Basel, Karger, 1991, **46**, 134–144.
3. Swoboda H, Neumann H, Cartellieri M. Änderungen des erkrankungsalters der karzinome des hypopharynx und des larynx seit 1960. *HNO* 1989, **37**, 85–91.
4. Schwartz D, Lellouch J. Flamant R, Denoix P. Alcool et cancer. Résultats d'une enquête rétrospective. *Rev Franç Etud Clin Biol* 1962, **7**, 590–604.
5. Elwood JM, Pearson JCG, Skippen DH, Jackson SM. Alcohol, smoking, social and occupational factors in the aetiology of cancer of the oral cavity, pharynx and larynx. *Int J Cancer* 1984, **34**, 603–612.
6. Tuyns AJ, Estève J, Raymond L, *et al.* Cancer of the larynx/hypopharynx, tobacco and alcohol: IARC international case–control study. *Int J Cancer* 1988, **41**, 483–491.