MAILBOX

Increased lens dipeptidase activity in aging and cataract

EDITOR—A new protease enzyme in the human lens, dipeptidase, has been purified to homogeneity and characterised recently by Sulochna et al. This enzyme is specific for dipeptides in its protease function while two other lens proteases, leucine aminopeptidase and amino peptidase III, can act on di-, tri-, and oligopeptides. It is reported that the activity of amino peptidase III did not change with age but the specific activity decreased in human cataract lenses. Two viewpoints on the role of such proteases have been discussed by earlier workers—namely, a decline in the proteolytic enzymes with age leading to an accumulation of degraded proteins and an excessive proteolysis destroying essential structural proteins. A study was carried out to find the activity and specific activity of dipeptidase in cataract and aged lenses. The enzyme activity was measured using Leu-Try as substrate by following the procedure described earlier. Lenses from human donor eyeballs and the operation theatre of Sankara Nethralaya, Vision Research Foundation were used for the analysis.

Activity and specific activity of human lens dipeptidase (normal and cataract) were compared with different age groups and are given in Tables 1 and 2. Though the activity tends to increase with age in the donor eyeball group, the increase is not statistically significant. There is not much difference in the activity among various age groups studied in cataract lenses. However, the specific activity decreases in human cataract lenses. The enzyme dipeptidase from human lens. Exp Eye Res 1996;62:221–9.


| Table 1 Activity of dipeptidase in human donor eyeball lenses (values are mean (SE)) |
|-------------|-------------|-------------|-------------|-------------|
| Age group (years) | Mean age | No of cases | Sex | Mean total activity (units/lens) | Specific activity (units/mg protein) |
| 31–40 | 35.3 | 3 | 1M 2 F | 11.65 (2.6) | 0.159 (0.055) |
| 41–50 | 45.4 | 5 | 2M 3 F | 13.62 (1.88) | 0.183 (0.028) |
| 51–60 | 55.7 | 3 | 1M 2 F | 15.1 (3.43) | 0.233 (0.041) |
| 61–70 | 67.7 | 8 | 4M 4 F | 16.52 (1.61) | 0.436 (0.064) |
| 71–80 | 76.5 | 6 | 5 M 1 F | 14.525 (2.94) | 0.413 (0.092) |

| Table 2 Activity of dipeptidase in human cataract lenses (values are mean (SE)) |
|-------------|-------------|-------------|-------------|-------------|
| Age group (years) | Mean age | No of cases | Sex | Mean total activity (units/lens) | Specific activity (units/mg protein) |
| 31–40 | 37.6 | 3 | 3 M | 13.4 (0.86) | 0.33 (0.033) |
| 41–50 | 45.2 | 4 | 2M 2 F | 11.8 (1.74) | 0.385 (0.075) |
| 51–60 | 54.7 | 9 | 7 M 2 F | 12.07 (1.51) | 0.418 (0.055) |
| 61–70 | 66.3 | 10 | 5 M 5 F | 12.31 (1.26) | 0.463 (0.058) |
| 71–80 | 77.2 | 4 | 3 M 1 F | 12.55 (2.67) | 0.421 (0.047) |

BOOK REVIEWS


 Possibly there is a great need for a good book with illustrations on the subject of phototherapeutic keratectomy for corneal disorders. Much has been written on the use of excimer laser for refractive surgery but much less has been written on it for therapeutic reasons. Yet this has been an important area for laser and with many indications and has provided significant benefit for patients reducing the need for both superficial and full thickness corneal grafting.

The authors set out in this book to try to address these issues. It is made up of seven chapters. Firstly, there is an introduction to excimer laser technology, followed by case selection and surgical decision making, then they outline techniques of excimer laser with clinical results and complications. They then provide refractive and topographic complications and considerations and, finally, the last chapter deals with phototherapeutic keratectomy for complications of excimer laser refractive surgery.

When writing a book there are probably two main audiences. First of all, the book is written purely for those who have a large grasp of the subject and who are subspecialists in the area and a book in that regard would tend to be written in much more easy and less simplistic fashion and will assume that the specialist will have an advanced understanding. Then, there is the book written for the average ophthalmologist, those who do not have this advanced or specialised knowledge or technique, but practise in the subject. This is a book clearly written for those with advanced knowledge of the subject and, while it has good intentions and the chapter headings are well chosen, it is a difficult book
to read as it is written in a rather confused fashion and mainly with the assumption that the readers have an in-depth knowledge of the use of laser in corneal disorders. This, in my view, is a pity because this book is extremely well illustrated with superb photographs of various types of disorders. It also has exceptional illustrations and is well referenced. It deals with the whole subject in 161 pages, which is very reasonable, and this in itself should encourage laser surgeons to buy and read it. However, the average laser surgeon will be very disappointed and, in my view, will find this book rather difficult to follow as it is poorly written in terms of simplicity. Perhaps the more advanced laser surgeon will find this book more readable and more valuable.

MICHAEL O’KEEFE


This book fills a niche in ophthalmology texts and is a welcome addition. The introductory sections describe the techniques of examination and the spectrum of normal appearances. This is well laid out and, with many of the illustrations being photographs taken through the indirect ophthalmoscope, the reader is well prepared for examining patients. Its first main section is on developmental abnormalities and it is noteworthy that the author thought it appropriate that this section should occupy more than one third of the book. My own exposure to ophthalmology from optometrists and to retinal specialists, as a result of this type of pathology and this text explains and illustrates the problems well. The section on vitreous degeneration and its relation to retinal disease is particularly well written, alluding to the most recent concepts in the role of changes in the vitreous and their effects on the retina. The different types and extents of vitreous detachment together with their symptoms and the implications are discussed well, as is the section on the role of trauma. In the chapter on retinal breaks the overall tenor is perfectly sound but I would be the number of ultrasound pictures and the symptoms and the implications are always specified or are non-SI, the Cartesian coordinates attract only the lay reader mention, and it was surprising to see u and v for object and image distance, rather than I and f. None the less, the format works particularly well in a book with a tight budget, in that the colour photographs clearly depict the electromagnetic spectrum. The authors achieve this aim: there are a few notable exceptions, such as keratoconus being given as an example of index myopia. There are a few other occasions where the text itself contains mistakes: prismatic displacement is said to be greater for an object close to the lens. Any mathematical formulas relevant to the topic are presented (with asking which of the five statements about “topic X” is/are correct). There are then a few paragraphs summarising the topic, and at the bottom of the page are listed the answers as to whether the statements were true or false. The use of questions and diagrams are used elsewhere in the test. This text has a significant span of excellent contributors who bring a substantial amount of experience to this textbook, then encompass all the relevant specialties one could expect in ophthalmic surgery and orbital surgery.

CHRISTINE DICKINSON


This text is aimed at the ophthalmologist, orthoptist, or optometrist, especially in their student or trainee days. It has an unaccustomed layout: each chapter is divided into (approximately) page sized chunks, with each chunk headed by using which of the five statements about “topic X” is/are correct. Overall, this is a well worthwhile book which would be of benefit to ophthalmologists and optometrists, and particularly those in training, while continuing to be an excellent guide to further reading.

TOM BARRIE

NOTICES

Ageing and the eye
The latest issue of Community Eye Health (no 29) discusses ageing and the eye. Included are papers on ageing and the eye from a global perspective; epidemiology; delivery of eye care to the elderly; and age related macular disease. For further information please contact Community Eye Health, International Centre for Eye Health, Institute of Ophthalmology, 11–43 Bath Street, London EC1V 9EL. (Tel: (+44) 171 608 6909/6910/6923; fax: (+44) 171 250 3207; email: eyeresource@ucl.ac.uk)

Annual subscription £25. Free to workers in developing countries.

Residents’ Foreign Exchange Programme
Any resident interested in spending a period of up to one month in departments of ophthalmology in the Netherlands, Finland, Ireland, Germany, Denmark, France, Austria, or Portugal should apply to: Mr Robert Acheson, Secretary of the Foreign Exchange Committee, European Board of Ophthalmology, Institute of Ophthalmology, University College Dublin, 60 Eccles Street, Dublin 7, Ireland.

British Ophthalmic Photographic Association
The British Ophthalmic Photographic Association (BOPA) will hold a workshop entitled “The other side of the chin rest” on 10 July 1999 at the Southampton Eye Unit. Topics include: consent; allergies and complications; living with visual impairment; and procedures. Cost £20. Further details: Tim Mole (tel: 01703 798747).

Vision ’99: International Conference on Low Vision and Vision Rehabilitation
The International Conference on Low Vision and Vision Rehabilitation will be held on 12–16 July 1999 at the Waldorf-Astoria Hotel, New York City, New York. Further details: Lighthouse International, 111 East 59th Street, New York, NY 10022-1202, USA (tel: (212) 821-9482; fax: (212) 821-9705; email: vision 99@lighthouse.org).

4th Meeting of the European Neuro-Ophthalmology Society
The 4th meeting of the European Neuro-Ophthalmology Society will be held on 29 August–2 September 1999 in Jerusalem, Israel. Further details: Secretariat, 4th Meeting of the European Neuro-Ophthalmology Society, PO Box 50006, Tel Aviv, 61500, Israel (tel: 972-3-514000; fax: 972-3-5175674/972-3-514007; email: Eunos99@kennes.com).

International Agency for the Prevention of Blindness
The sixth general assembly of the International Agency for the Prevention of Blindness will be held in 5–6 September 1999 at the Conference Centre, Beijing Friendship Hotel, Beijing, People’s Republic of China. The theme is “The right to sight”. Further details: IAPB Secretariat, LV Prasad Eye Institute, LV Prasad Marg, Banjara Hills, Hyderabad 500 034, India (tel: 091-40-215389; fax: 091-40-248271; email: IAPB@lyseye.stph.net).

Ophthalmological Clinic, University of Creteil
An international symposium on the macula will be held on 1–2 October 1999 at the Ophthalmological Clinic, University of Creteil. Further details: Professor G Soubrane, Chef de Service, Clinique Ophthalmologique Universitaire de Creteil, Centre Hospitalier Intercommunal, 40 Avenue de Verdun, 94010 Creteil, France (fax: 01 45 17 52 27).

Jules François Prize
The 2000 Jules François Prize of $100 000 for scientific research in ophthalmology will be awarded to a young scientist who has made an important contribution to ophthalmology. All topics in the field of fundamental and/or clinical research in ophthalmology will be considered. The application should be sent jointly with a curriculum vitae, the list of all publications, and three copies of the candidate’s 10 most relevant publications to Jules François Foundation Secretary, Professor Dr M Hanssens, Dienst Oogheelkunde, de Pintelaan 185, B-9000 Gent, Belgium. Deadline for applications 31 December 1999.

XXXIV Nordic Congress of Ophthalmology
The XXXIV Nordic Congress of Ophthalmology will be held in Reykjavik, Iceland, 18–21 June 2000. This meeting celebrates the 100 year anniversary of the Nordic Ophthalmology Conference. Further details: Iceland Incentives Inc, Hamraborg 1–3, Is-Kopavogur, Iceland (tel: +354 554 1400; fax: +354 554 1472; email: incentiv@itn.is).

DR-2000, International Forum on Diabetic Retinopathy
The International Forum on Diabetic Retinopathy will take place on 7–9 September 2000 at the Palazzo Reale, Naples, Italy. Further details: Francesco Bandello, Congress Secretariat, MGR Congressi, Via Servio Tullo, 4, 20123 Milano, Italy (tel: 39 02 430071; fax: 39 02 48008471; email: dr2000@rmgr.it).

12th Afro-Asian Congress of Ophthalmology
The 12th Afro-Asian Congress of Ophthalmology (Official Congress for the Afro-Asian Council of Ophthalmology) will be held on 11–15 November 2000 in Guangzhou (Canton), China. The theme is “Advances of ophthalmology and the 21st century”. Further details: Professor Lezheng Wu, Zhongshan Eye Center, SUMS, New Building, Room 919, 54 Xianlie Nan Road, Guangzhou 510060, PR China (tel: +86-20-8760 2402; fax: +86-20-8777 3370; email: lwuicv@gzsums.edu.cn).