Correspondence.

Card Indexing for Preserving Useful Medical Information.

PHILADELPHIA, Feb. 11, 1905.

To the Editor:—Among the difficulties which beset the physician is to preserve useful information on various subjects in systematic shape for ready reference. The best method of doing this, coming steadily into vogue, is the card index. Much of useful data is offered in the form of advertisements, prospectuses, book notices, booklets, leaflets, circulars or cards of irregular size, making it utterly impossible to arrange them comfortably, hence to preserve them in such a fashion that they can be readily consulted.

I made the suggestion long ago to the drug manufacturers that if they desired, or expected, us to bear in our minds descriptions of their preparations, some of which contain much merit, they should make it practicable by giving us printed information, much or little, on cards of the ordinary size used in the card indexes. This is the best way.

Thus a card index could be kept especially for "therapeutic suggestions," notes on treatment gleaned from divers sources. Some of the drug houses have adopted this suggestion, and are sending out cards containing a list of their special preparations which can be conveniently filed. Two sides of a card provide much space.

If the proprietors of the various sanatoria designed for rest or recuperation or special treatment would adopt the card index system in addition to their regular circulars, these would be put on file alphabetically under the heading "Sanitaria" or health resort, coastwise or mountain hotels, springs, spas, etc., and would thus be promptly called to the mind of the physician when groping vaguely to find a suitable place to send a patient for rest, recreation or special treatment. The same card index plan would serve publishers of books.

The card index system for keeping notes of cases is recognized to be the best which has so far been offered, likewise for the keeping of accounts and other matters requiring useful record.

These are now offered in such cheap convenient forms that there should be no difficulty in securing and keeping, and the possibility is thus made easy to systematize references so that various other data could thus be preserved in such a fashion that no important facts need be far distant from our daily work.

A single drawer in an ordinary desk could easily contain two such card indexes, at least in the forward end, and thus an ordinary desk of three or four drawers could be well equipped with six or eight card indexes.

There is too much labor in taking a blank card and writing out the data, but if cards were supplied suitably printed and black lettered which could slip in the proper alphabetical order, there would follow a great economy of time and trouble and attention, and an immense saving of useful information.

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Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

VALUE OF ALBUMOSURIA AS A MEANS OF DIAGNOSIS.

TRENTON, N. J., Jan. 10, 1905.

To the Editor:—What dependence is to be placed on albumosuria as a means of diagnosing concealed pus in either of the great cavities, or in deep-seated muscular structures of the body? Please give the most reliable and accurate test, or tests, for this substance in the urine.

C. H. GORDON, M.D.

ANSWER.—By albumosuria is meant the appearance in the urine of those higher soluble cleavage products of the albumins which, though they are not coagulable, can be removed from solution by "out-salting"—the so-called "albumoses." Physiologic chemists distinguish two classes of albumoses, the primary albumoses (protoalbumose and heteroalbumose), which stand very close to the

albumins proper, and the secondary or deutoalbumoses which stand close to the peptones. The albumoses which occur in the urine appear to be chiefly deutoalbumoses. The condition so often described as "peptonuria" is in the majority of cases really "albumosuria." The amounts of albumose in the urine vary from 0.06 to 0.6 per cent., the larger amount occurring usually in cases of empyema or croupous pneumonia. Albumoses occur in the urine in various pathologic circumstances. The so-called "enterogenous albumosuria" is met with in cases of ulcer of the stomach, ulceration of the intestine and carcinoma of the stomach. The so-called "pyrogenous albumosuria" is encountered in various suppurative processes—large abscesses, empyema, croupous pneumonia, mixed infections with tuberculosis, etc. The so-called "endogenous albumosuria" is met with where body-tissues are breaking down, e. g., in phosphorus poisoning, in acute yellow atrophy of the liver, in carcinoma of the liver, etc. Beside, deutoalbumoses have been demonstrated in the urine in many febrile processes, e. g., pneumonia, scarlet fever, influenza, diphtheria, measles, typhoid fever and tuberculosis. In order to be absolutely sure of the presence or absence of albumoses in the urine, especially of small amounts, it is necessary to remove any albumin, globulin, mucin or nucleo-albumin that may be present. But, roughly, for clinical purposes, the following preliminary tests may be made: (1) Heating acidified urine. Heat five or ten c.c. of urine to which a trace of acetic acid has been added in a test tube to boiling and filter hot. If albumoses are present the filtrate becomes turbid, and this turbidity will increase on the addition of ammonium sulphate. When the filtrate is cooled, add some caustic potash and one drop of copper sulphate solution (5 per cent.); if albumoses are present the reddish-violet biuret reaction is obtained. (2) Ferrocyanid of potassium and acetic acid test. To 10 c.c. of urine add 5 drops acetic acid; should a precipitate form (urates, mucin, etc.), filter and add from one to three drops of a 5 per cent. solution of ferrocyanid of potassium. If a precipitate forms, which vanishes on heating to reappear on cooling, the presence of albumoses is demonstrated. A safer clinical test is that of A. Jolles (*Pharmaceutisches Centralblatt*, vol. xxxvii, 1896, p. 432). About 10 c.c. of urine are thoroughly shaken with a little animal charcoal, the filtrate mixed with two drops of solution of lead acetate and filtered again. If albumin is present, it should be first removed by adding a few drops of a 10 per cent. solution of acetic acid, boiling, neutralizing with 10 per cent. NaOH, shaking with animal charcoal, filtering, precipitating with lead acetate and filtering again. The filtrate is now free from urobilin and almost colorless; apply the biuret reaction. Of the strictly scientific methods that of F. Hofmeister is as good as any. To half a liter of urine are added 10 c.c. of a concentrated solution of sodium acetate, and then, drop by drop, a concentrated solution of ferric chlorid until the fluid remains permanently red. If the urine is strongly acid, it is nearly neutralized, then boiled and, after cooling, filtered. The filtrate must contain no iron or albumin. To this filtrate is now added one-tenth of its volume of concentrated hydrochloric acid and then an acid solution of phosphotungstic acid (200 grams phosphotungstate of soda and 120 grams phosphate of soda dissolved in 1,000 c.c. water and 100 c.c. concentrated sulphuric acid added) as long as it continues to throw down a precipitate. Collect the precipitate on a filter, wash it with a 5 per cent. solution of sulphuric acid, rub it up while still moist with solid barium hydrate, add a little water, warm for a short time until the original greenish color is changed to pure yellow and then filter the mixture. Free the filtrate from barium by means of dilute sulphuric acid, concentrate the filtrate, make the solution alkaline, and add cautiously, drop by drop, shaking constantly, some diluted 1 per cent. solution of copper sulphate; if albumoses be present, the biuret-reaction is obtained, first a rose color and later a violet tint. If the urine contains mucin it should be first removed by the addition of a small amount of lead-acetate solution. The so-called "Bence-Jones body" is often spoken of as an albumose, but more recent studies have proved that it is a native albumin. The best description of it is to be found in the article by Magnus-Levy (*Ztschr. f. physiol. Chem.*, vol. xxx, 1900, p. 200). It occurs in the urine in cases of osteomalacia, often in very large quantities, sometimes as much as 6.7 per cent. If acid urine containing the Bence-Jones body be heated with a little concentrated solution of common salt to 50 degrees C., the urine first turns milky and at 60 degrees gives a sticky (not flocculent) precipitate, which adheres to the walls of the test tube or swims on the surface of the fluid. On heating further, the turbidity and precipitate disappear and the solution becomes clear; on cooling, the albumin body again separates out, and under the microscope appears in the form of spheres, occasionally in the form of crystals. That it is really an albumin (and not an albumose) is shown by the facts (1) that when pure it can be completely coagulated; (2) that with alcohol it can be denaturalized; (3) that strong acids or alkalis convert it into acid albumin or alkali