

פלסר, עודד



עודד, בן פאני ואוסקר, נולד ביום א' באב תרצ"ט (17.7.1939) בירושלים. את לימודיו היסודיים החל בבית הספר "אשכול" והמשיכם ב"גימנסיה העברית רחביה". את לימודיו התיכוניים סיים ב"בית חינוך" בירושלים, בשנת 1957. עודד אהב את נופי הארץ והרבה לסייר ולטייל בשביליה, ועניין מיוחד היה לו בארכיאולוגיה של ארץ ישראל. מילדותו התמסר בשעותיו הפנויות לתחביבו – איסוף בולים, סמלים ומטבעות. מגיל צעיר

היה פעיל בתנועת "הצופים" ובמסגרתה התנדב ללמד עברית במושב העולים בפרוזדור ירושלים.

עם חבריו לגרעין בתנועת הצופים התגייס לנח"ל. בתוך שירותו הצבאי עבר קורס אימון מתקדם, קורס צניחה וקורס קשרים, וכמו-כן שימש בתפקיד מדריך-שליח של התנועה בבית-הספר הריאלי העברי בחיפה.

עם סיום השירות הצבאי הצטרף כחבר לקיבוץ מגל שבעמק חפר. בשנת 1961 החל ללמוד בפקולטה לחקלאות של האוניברסיטה העברית בירושלים. לאחר שנה המשיך את לימודיו באוניברסיטת אוטרכט שבהולנד, בפקולטה לרפואה וטרינרית. בימי הכוונות שלפני מלחמת ששת הימים עזב את לימודיו ושב ארצה להתייצב ביחידתו. בראשית 1968 סיים בהצטיינות את לימודיו ברפואה וטרינרית. עתה שב ארצה והחל לחפש את דרכו המקצועית. עבד תקופה קצרה בלשכה הוטרינרית ברחובות ואחר-כך בחברה פרטית ליבוא ולהפצת תרופות. בשנת 1970 החל לעבוד כרופא עופות אזורי בירושלים, מטעם משרד החקלאות. בעבודה זו ראה ייעוד והתמסר לה בכל מאודו. הוא הדריך את מגדלי העופות הבלתי-מנוסים והשתדל לעשותם חקלאים של ממש, שיראו ברכה בעמלם. לשם הגשמת שאיפה זו לא חסך במאמצים להסביר, להדגים ולשכנע. סבלנותו הרבה ומסירותו לעניין אף מחוץ לשעות העבודה הרשמיות, יחסו ההוגן לכל ואדיבותו הרבה, היו לשם דבר בכל ישובי האזור. מגדלי העופות הכירו לו תודה ורבים אף היו לו לידידים. חוש ההומור המעודן שבו ניחן, אף הוא סייע לו לקשור קשרים עם זולתו. תמיד דחקה בו השאיפה ללמוד ולדעת יותר; בד בבד עם עבודתו המעשית בשדה, השתלם במסגרת לימודי ההמשך ברפואה, באוניברסיטת תל-אביב. ביום הכיפורים תשל"ד (6.10.1973) היה במעוז "מילנו", מול העיר קנטרה שעל גדת תעלת סואץ. בשעותיה הראשונות של המלחמה, בעומדו בתצפית במעוז, נפגע ונהרג. הובא למנוחת-עולמים בבית-הקברות הצבאי בהר-הרצל בירושלים. עודד הניח אחריו הורים דואבים, אשה – רבקה, אותה נשא בשנת 1963 ושתי בנות – יערה (1971) ודנה (1972).

עודד חלם להקים בירושלים מעבדה גדולה לשירות חקלאי האזור, שתהא ברמה מדעית גבוהה ושה יקודם מחקר מחלות העופות. המעבדה שהחל להקים אכן התפתחה מאוד ונקראת כיום על שמו; ביזמת חבריו הרופאים, משקי האזור, חברות לייצור תרופות והמשפחה, הוקמה קרן הנושאת את שמו, ומפירותיה מחלקים מדי שנה פרסים למחקרים בתחום רפואת העופות.

TABLE 5
Number of Isolations of *K. pneumonia*, *E. coli* and *Salmonella*
in Various Materials and Sections of Four Hatcheries

Material or Section	Number of Isolations		
	<i>K. pneumonia</i>	<i>E. coli</i>	<i>Salmonella</i>
Eggshell	6	6	1
Fluff	3	3	
Hands of Workers	11	2	
Cooling Room			
Equipment	7	2	
Egg Room Equipment	8	2	
Setting Room			
Equipment	8	8	1
Hatching Room			
Equipment	6	5	
Chick Sorting Room	9	1	
Total	58	29	2

and, in the event of the reaction being characteristic for *K. pneumonia*, to proceed then with the usual array of tests for the definitive identification of the species (4, 5, 6, 7).

This is the first report of the isolation of *K. pneumonia* from chickens and hatcheries and confirms in greater detail the recent brief report of this species in turkey poults (9). Most of the isolations were made in birds less than two weeks old (Table 4), and coming from 25 out of 29 hatcheries supplying chicks and poults to the area that was studied. In view of the large number of flocks in which *K. pneumonia* was found (Table 1) and the widespread sources for the young birds forming these flocks, it may be assumed that *K. pneumonia* is probably more widely dispersed in the poultry flocks of this country than was suspected in the past. Non-identification of this species till now can possibly be explained by the tendency in the past not to continue with a definitive identification of lactose fermenters from poultry that were not *E. coli*.

The data presented here do not prove that *K. pneumonia* causes disease in poultry, but the fact that more than 80% of isolations were from heart and liver suggests the possibility of septicemia in these birds. This assumption is further supported by the facts that isolations were also made from bone marrow, and that in most of the sick or dead birds it was not possible to isolate any other pathogen. These facts suggest that it

would be of great interest to determine the carrier rate for *K. pneumonia* in healthy birds and to perform pathogenicity tests on the isolates.

The findings reported here have a zoonotic significance, inasmuch as it is known that *K. pneumonia* can cause disease in man and other mammals. In this connection it is interesting to note the large numbers of isolations of *K. pneumonia* from the hands of workers who come into regular contact with eggs and chicks (Table 5).

Summary

The isolation of *Klebsiella pneumonia* from sick and dead poultry and from hatcheries is reported.

Over a three-year period, *K. pneumonia* was isolated from 55 turkey flocks, 51 chicken flocks, and from the equipment and personnel of 4 hatcheries that were studied. Birds less than two weeks old provided 71% of the isolations, and 79% of the isolations from birds came from the heart or liver.

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isolates produced gas but not H₂S, an acid butt and an alkaline slant. After 48 hours of incubation the butt including the urea agar layer turned pink (alkaline).

Table 1 compares the number of isolations of *K. pneumonia* to those of other enterobacteria from the same specimens. More cases of *K. pneumonia* than of *Salmonella* were isolated from chickens, turkeys and, especially, from hatcheries. The number of poultry flocks in which *E. coli* was found was about three times as great as the number from which *K. pneumonia* was isolated, but in the case of hatcheries, *K. pneumonia* occurred more frequently than *E. coli*.

TABLE 2
Number of Isolations of *K. pneumonia* according to Organs Examined

	Species		
	Chickens	Turkeys	Total
Isolations from Birds submitted alive			
Heart	13	12	25
Liver	9	8	17
Intestines	3	5	8
Lungs	0	3	3
Trachea	2	0	2
Air Sacks	1	1	2
Conjunctiva	1	1	2
Spleen	1	1	2
Yolk Sac	1	0	1
Total Isolations from live birds	31	31	62
Isolations from dead birds			
Heart & Liver	21	28	49
Bone Marrow	3	1	4
Grand Total	55	60	115

Table 2 shows that most *K. pneumonia* isolations were made from heart and liver (68% of the isolations from live birds, 79% of the total of isolations from live and dead birds). In live birds, the respiratory system provided 7 out of the 62 isolations. (The number of isolations shown from organs is greater than that for flocks on Table 2, because *K. pneumonia* was sometimes isolated from several organs of the same bird, or in several birds from the same flock).

TABLE 3
Number of Flocks in which Pathogens in addition to *K. pneumonia* were isolated

	Species		
	Chickens	Turkeys	Total
Total <i>K. pneumonia</i> isolated	51	55	106
<i>K. pneumonia</i> only	33	37	70
<i>E. coli</i>	13	10	23
<i>Salmonella</i>	3	3	6
<i>Past. multocida</i>	—	2	2
<i>Past. anatis</i>	1	1	2
<i>Streptococcus</i>	—	1	1
<i>Aspergillus</i>	—	1	1
Newcastle Disease Virus	1	—	1

In 70 out of 106 flocks (66%) where *K. pneumonia* was found, no other pathogen was isolated (Table 3). In the remaining 36 flocks, *E. coli* was the most prevalent species, occurring in 23 isolations.

K. pneumonia was isolated most frequently from young birds less than two weeks old (76 out of 106 flocks) (Table 4).

TABLE 4
Age Groups of Flocks in which *K. pneumonia* was isolated

Species	Age of Flock in Weeks					Total
	0-1	1-2	2-5	5-24	Over 24	
Chickens	32	9	4	4	2	51
Turkeys	25	10	6	12	2	55
Total	57	19	10	16	4	106

When the specimens submitted for diagnosis over the three-year period were grouped according to month, it was apparent that most isolations of *K. pneumonia* (79 out of 106) occurred in the January-to-June half of the year. During these months, *K. pneumonia* was found in 3.4% of the bacteriological examinations performed, as compared to 1.4% in the second half of the year.

The flocks from which *K. pneumonia* was isolated during the first two weeks of life consisted of birds supplied by 16 out of 19 chicken and 9 out of 10 turkey hatcheries. In most instances, only 1 to 4 isolations of *K. pneumonia* were made per hatchery over a period of three years. On the other hand, isolations were made in 20 flocks provided by a single turkey hatchery, and from 8 flocks provided by one chick hatchery. In those two hatcheries, the mortality of birds during the first ten days was generally higher than normal, and *E. coli* was isolated frequently.

In 4 hatcheries, the materials and locations that were contaminated with *K. pneumonia*, *E. coli* or *Salmonella* are shown in Table 5.

K. pneumonia was isolated 58 times, compared to 29 for *E. coli* and 2 for *Salmonella*. Most prominent was the number of isolations from the hands of hatchery personnel. The bacteria were also isolated in all the work-rooms of the hatcheries, from egg-shells and from the fluff of the hatching chicks.

Discussion

K. pneumonia has been said (4) to produce an acid slant on TSI medium, like *E. coli*, but in our hands all of the isolations that yielded cultural and biochemical reactions characteristic for *K. pneumonia* gave basic slants on TSI agar. It is suggested, therefore, that lactose-positive, mucoid colonies be examined first on TSI agar

פלסר עודד בן פאני ואוסקר. נולד ביום א' באב תרצ"ט (17.7.1939) בירושלים.
למד בבית הספר היסודי אשכול והמשיך בגימנסיה העברית, רחביה. את לימודיו התיכוניים השלים בבית-הספר בירושלים.
סיים לימודים ברפואה וטרינרית באוטרקט, הולנד.
נפל בקרב במעוז "מילנו" על גדת תעלת סואץ ביום הכיפורים תשל"ד (6.10.1973).

The Isolation of *Klebsiella pneumonia* from Poultry and Hatcheries

בידוד ה-*Klebsiella Pneumonia* מתרנגולות ובתי-אימון. המחקר נערך במעבדה לחקר מחלות של תרנגולות, השרות הוטרינארי, משרד החקלאות, ירושלים.
צוות החוקרים: א. אבן-שושן; א. בנדהיים; ע. פלסר.
פורסם ב"רפואה וטרינארית", רבעון – בטאון התאחדות רפואית וטרינארית בישראל, כרך 32, גליון מס' 3, 1975, ע"ע 105-99.

Klebsiella pneumonia has been associated with pneumonia, diarrhea and nephritis in man (8, 12, 14), mastitis in cattle (1, 3), pneumonia in dogs (10), and metritis in mares (2, 15). Recently *K. pneumonia* was isolated from the respiratory tract of turkey poults (9), but the species has not been reported otherwise from chickens, viscera of turkeys, or hatcheries.

The purpose of this survey was to determine whether *K. pneumonia* could be isolated from poultry and hatcheries in Israel. The period of the study was August 1972 to August 1975.

Materials and Methods

Birds: Sick or dead birds submitted for routine diagnosis from 56 poultry raising settlements that obtained their birds from 19 chicken and 10 turkey hatcheries were examined. In the case of adult birds, any internal organs showing pathological changes as well as bone marrow in cases of septicemia were studied. In chicks and poults up to 14 days old that were presented alive, separate examinations were made from the heart, liver and intestines. In young birds presented dead, examinations were made of the heart and liver together, while the intestines were examined separately.

Hatcheries: In 4 chick hatcheries the following materials were studied every 3 months during the period of the survey: eggs, fluff, equipment from the cooling, setting, hatching and chick processing rooms. In addition, hands of hatchery workers were examined.

Isolation media: Isolation of bacteria from birds was made both by direct plating on MacConkey's agar* and after enrichment in selenite broth* followed by transfer to MacConkey's or Brilliant Green agar*. Isolation from hatcheries was made by the "agar sausage" method in a manner similar to that used in the control of food industries (13). The agar slices from the "sausage" were covered with selenite broth and thereafter plated on solid media as described above.

Identification: The following cultural and biochemical characteristics were taken as diagnostic for *K. pneumonia* (4, 6, 7): mucoid colonies, lactose fermenta-

tion, non-motility in Sim's* and GI motility agar*, positive Voges Proskauer reactions, negative methyl red, metabolism of citrate as only carbon source in Simmons citrate medium*, H₂S negative in Sim's medium*, indol reaction negative, metabolism of urea in agar containing 0.2% urea, decarboxylation of lysine iron agar*, ornithine decarboxylase negative.

All tests were run on 3 suspect colonies from each isolation. Parallel tests were run on known *E. coli* and *K. pneumonia* strains provided by the central laboratories of the Ministry of Health in Jerusalem. Presumptive identification of isolates as *K. pneumonia* were confirmed by the centre for the identification of enterobacteria of the Ministry of Health, Jerusalem.

In addition to the standard procedures for identifying *K. pneumonia* listed above, all suspect colonies were also inoculated into TSI agar* slants formed in tubes containing a primarily prepared butt of urea agar — in order to check the sugar fermentation properties of the isolates.

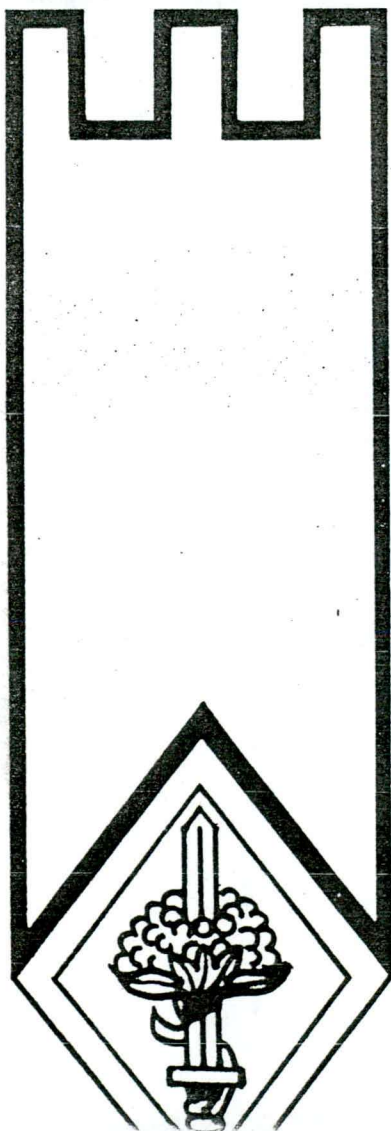
Results

Bacteria yielding the characteristic reactions for *K. pneumonia* were isolated both by direct plating on solid media as well as after enrichment with selenite broth. In TSI medium, after 24 hours of incubation, these

TABLE I
Number of Isolations of *K. pneumonia*, *Salmonella* or *E. coli* according to Flocks and Hatcheries

Source of Isolation	No. of flocks examined	No. of flocks from which enterobacteria were isolated		
		<i>K. pne-</i>	<i>Salmonella</i>	<i>E. coli</i>
		<i>umonia</i>		
Chickens	1748	51	17	151
Turkeys	2035	55	51	176
Hatcheries	622*	58	2	29
Total	4405	164	70	356

* Total bacteriological examinations in hatcheries, including equipment, hands of workers, eggs and fluff.



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הניח אשה — רבקה
ושתי בנות — יערה ודנה

